



---

# TriMet Defined Benefit Retirement Plan for Management and Staff Employees

**July 1, 2016 GASB 67 and 68 Valuation**

**Prepared by:**

Milliman, Inc.

**Nina M. Lantz, FSA, EA, MAAA**

Principal and Consulting Actuary

Milliman, Inc.  
111 SW Fifth Avenue, Suite 3700  
Portland OR 97204-3654  
Tel +1 503 227 0634  
Fax +1 503 227 7956  
milliman.com



111 SW Fifth Avenue  
Suite 3700  
Portland, OR 97204  
USA

Tel +1 503 227 0634  
Fax +1 503 227 7956

milliman.com

August 9, 2016

Ms. Dee Brookshire  
Executive Director of Finance and Administration  
TriMet  
1800 SW 1<sup>st</sup> Avenue, Suite 300  
Portland, Oregon 97201

Dear Dee:

As requested, we performed an actuarial valuation of the TriMet Defined Benefit Retirement Plan for Management and Staff Employees as of July 1, 2016, for the Plan Year ending June 30, 2017. Our findings are set forth in this actuary's report.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by TriMet. This information includes, but is not limited to, benefit provisions, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, and other factors for the Plan have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the Plan and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the Plan. The assumptions used for the valuation were selected by the Plan's Board of Trustees and TriMet, including the assumption for the long term expected return on plan assets of 6.30%. The Plan's Board of Trustees and TriMet have the final decision regarding the appropriateness of the assumptions.

This valuation report is only an estimate of the Plan's financial condition as of a single date. It can neither predict the Plan's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of Plan benefits. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and

Ms. Dee Brookshire  
August 9, 2016  
Page 2

changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

Actuarial computations presented in this report are for purpose of fulfilling TriMet's financial accounting and reporting requirements under GASB 67 and 68. The calculations enclosed in this report have been made on a basis consistent with our understanding of the Plan, TriMet's funding policy and GASB 67 and 68. Determinations for purposes other than meeting financial reporting requirements may be significantly different than the results contained in this report. Accordingly, additional determinations may be needed for other purposes, such as judging benefit security or meeting employer funding requirements.

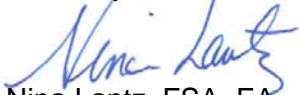
Milliman's work is prepared solely for the use and benefit of the Plan's Board of Trustees and TriMet. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. No third party recipient of Milliman's work product should rely upon this report. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuary is independent of the plan sponsor. I am not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, I hereby certify that, to the best of my knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. I am a member of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,



Nina Lantz, FSA, EA, MAAA  
Principal and Consulting Actuary

NML:nml  
encl.

**TRIMET DEFINED BENEFIT RETIREMENT PLAN FOR  
MANAGEMENT AND STAFF EMPLOYEES**

**Table of Contents**

<u>Section</u>	<u>Page</u>
1 PURPOSE AND SUMMARY .....	1
2 DISCUSSION OF THE VALUATION .....	4
<i>Exhibit 1</i> Depletion Date Projection .....	7
<i>Exhibit 2</i> Projection of Fiduciary Net Position and Discount Rate.....	8
<i>Exhibit 3</i> Net Pension Liability .....	9
<i>Exhibit 4</i> Changes in Net Pension Liability .....	10
<i>Exhibit 5</i> Pension Expense .....	11
<i>Exhibit 6</i> Schedule of Deferred Inflows and Outflows of Resources .....	12
<i>Exhibit 7</i> Schedule of Changes in Total Pension Liability, Fiduciary Net Position and Related Ratios .....	13
<i>Exhibit 8</i> Schedule of Employer Contributions .....	14
<i>Exhibit 9</i> Money-Weighted Rate of Return .....	15
<i>Exhibit 10</i> Long-Term Expected Rate of Return by Asset Class.....	16
 <u>Appendices</u>	
A PLAN PROVISIONS.....	A-1
B ACTUARIAL ASSUMPTIONS AND COST METHOD .....	B-1
C PARTICIPANT INFORMATION .....	C-1
D PROJECTED BENEFIT PAYMENTS .....	D-1

## SECTION 1 Purpose and Summary

### Purpose

This report presents the results of our actuarial valuation of the Plan as of July 1, 2016. The purpose of this report is to develop the actuarial disclosure information required by the Government Accounting Standards Board (GASB) Statements No. 67 and 68 as of June 30, 2016.

The assumptions used for the valuation were selected by the Plan's Board of Trustees and TriMet, including the assumption for the long term expected return on plan assets of 6.30%. Performing the valuation using other assumptions will yield different results.

The figures in this report are only intended for financial reporting under GASB 67 and 68. The formal funding calculations as of July 1, 2016 have not yet been completed, but may be based in part on the findings in this report.

Unless otherwise specified, all amounts prior to July 1, 2015 were shown in previous valuation reports prepared by SilverStone Heintzberger Group.

### Plan Benefits Valued

The Plan provisions used for the valuation were based on the plan document restated effective July 1, 2013 and are summarized in Appendix A. There were no amendments since the last valuation.

### Actuarial Methods and Assumptions

Appendix B summarizes the assumptions and methods used for the valuation. Changes from the July 1, 2015 actuarial valuation are listed below.

- The long-term expected return on plan assets was lowered from 6.50% to 6.30% to reflect updated economic expectations.
- The inflation assumption was lowered from 2.75% to 2.50% to reflect updated economic expectations.
- Post-retirement benefit increases were updated to reflect the change in the inflation assumption.
- The assumption for administrative expenses was increased from \$90,000 to \$100,000 to reflect anticipated experience.

The net effect of lowering the long-term expected return assumption and the lowering the inflation assumption was an increase in total pension liability of about \$146,000. The additional year of mortality projection increased total pension liability by about \$329,000. The increase in administrative expenses did not impact the total pension liability.

## Participant Statistics

The following is a summary of the more important figures developed in this valuation, together with comparable figures from the prior valuation report. The participant data that was supplied to us is summarized in more detail in Appendix C.

	July 1, 2015	July 1, 2016
Active Participants		
Accruing Service	126	114
Frozen Service	15	15
Average Age	55.3	55.7
Average Years of Vesting Service	22.4	23.2
Union Transfers	26	23
Vested Terminations	96	91
Retirees & Beneficiaries	234	250
Average Age	69.4	69.9
Average Monthly Benefit	\$1,519	\$1,545
Leaves & Disabled	3	3
Total Participants	500	496
Ratio of Inactives to Actives	2.55	2.85

## GASB Summary

A summary of the key figures disclosed under GASB 67 and 68 for fiscal years ending June 30, 2015 and June 30, 2016 are shown below.

	June 30, 2015	June 30, 2016
Total Pension Liability	\$ 129,131,739	\$ 133,362,366
Fiduciary Net Position	<u>111,100,177</u>	<u>114,997,281</u>
Net Pension Liability	\$ 18,031,562	\$ 18,365,085
Funded Percentage	86.04%	86.23%
Pension Expense	\$ (971,720)	\$ 2,977,231
Discount Rate	6.50%	6.30%
Long-term Expected Return on Plan Assets	6.50%	6.30%
Actuarially determined contribution	\$ 4,219,471	\$ 4,242,053
Actual employer contribution	<u>6,559,317</u>	<u>7,036,203</u>
Contribution deficiency (excess)	\$ (2,339,846)	\$ (2,794,150)

The annual pension expense reflects changes in the net pension liability from the prior year to the current year, with limited smoothing for investment gains and losses, economic and demographic gains and losses and assumption changes.

## Experience Gains and Losses

Experience gains and losses occur due to Plan experience that is different from the actuarial assumptions used to value the Plan's liabilities and assets. Since actual experience will never exactly match the Plan's assumptions, it is certain that the Plan will experience actuarial gains and losses each year. These gains and losses arise from two sources: investment experience and demographic experience. During the 2015-2016 plan year, the total experience loss was approximately \$4.5 million.

### Investment Experience

The investment rate of return on the fiduciary net position for the plan year ending June 30, 2016 was about 1.3%. Compared to the 6.5% return assumed for the 2015-2016 plan year, there was an investment loss of approximately \$5.8 million.

### Demographic Experience

Demographic gains and losses occur when the Plan's actual demographic experience differs from our valuation assumptions. The Plan experienced a net gain on the total pension liability of approximately \$1.3 million from demographic experience different than assumed.

Sources of demographic gains for the 2015-2016 plan year include the cost-of-living adjustments (COLAs) coming in below the valuation assumption (2.475% assumed versus 0.35% actual), terminated vested participants retiring later than expected, and a slightly higher number of inactive deaths than expected.

These gains were partially offset by higher than expected salary increases (2.75% assumed versus 3.91% actual) and higher benefits for active participants who retired during the year.

## Sensitivity of Results

The results presented in this report are dependent upon the actuarial assumptions being realized in the future. To the extent that actual Plan experience differs from the assumptions, future actuarial costs will differ from those presented in this report.

## SECTION 2

### Discussion of the Valuation

#### GASB 67 and 68

GASB released new accounting standards for public pension plans and employers in June 2012. These standards, GASB Statements No. 67 and 68, substantially revised the accounting requirements previously mandated under GASB Statements No. 25 and 27. GASB 67 applies to financial reporting for public pension plans and is effective for plan fiscal years beginning after June 15, 2014. GASB 68 governs the accounting for pension plan obligations for public employers and is effective for employer fiscal years beginning after June 15, 2015.

TriMet elected to apply both of the new GASB accounting standards effective beginning with the fiscal year ending June 30, 2014.

A summary of the historical measurements is shown on Exhibit 7.

#### Discount Rate

Under GASB 67 and 68, the discount rate is a single rate that reflects the long-term expected rate of return on the fiduciary net position to the extent those assets plus future contributions in excess of normal costs are sufficient to pay projected benefits, and a 20-year tax-exempt, high quality general obligation municipal bond yield or index rate to the extent that assets and future contributions are not sufficient.

Further, the standards provide that professional judgment should be used in projecting contributions for this solvency projection. Contributions established by statute or contract or any formal, written policy related to contributions should be reflected. The most recent five years of contributions made by the employer should also be considered as a key indicator of future contributions. TriMet adopted a formal, written funding policy which should be considered in conjunction with their recent contribution practice for purposes of developing the discount rate.

Exhibit 1 describes the techniques and assumptions used for the depletion date projection. Exhibit 2 shows the projection of the fiduciary net position over the next 30 years assuming all assumptions are met and describes the discount rate. Exhibit 3 shows the discount rate as of June 30, 2015 and June 30, 2016.



## Net Pension Liability

The net pension liability is measured as the total pension liability minus the fiduciary net position.

Total pension liability is determined using the entry age normal actuarial cost allocation method. In addition, GASB 67 and 68 require that the allocation of costs for accounting purposes be made as a level percentage of employees' projected pay, including future anticipated pay increases. The Plan's total pension liability reflects a 2.75% long-term annual salary increase assumption.

The fiduciary net position is equal to the market value of assets as of the valuation date.

Exhibit 3 shows the net pension liability as of June 30, 2015 and June 30, 2016. The changes in the net pension liability from June 30, 2015 to June 30, 2016 are shown on Exhibit 4. The 10-year schedule of changes in the net pension liability and related ratios are provided in Exhibit 7. This 10-year schedule is shown on a prospective basis from June 30, 2011 as allowed under GASB 67 and 68.

## Sensitivity Analysis

Exhibit 4 shows what the net pension liability would be using a discount rate that is 1 percentage point lower and 1 percentage point higher than the rate used as of June 30, 2016.

## Deferred Inflows and Outflows

Under GASB 68, gains and losses which are amortized over future years are referred to as deferred inflows (gains) and deferred outflows (losses).

- Investment gains and losses are recognized over a closed five year period.
- Economic and demographic gains and losses and changes in the total pension liability due to changes in assumptions are recognized over the closed period equal to the average expected remaining service lives of all covered active and inactive employees, determined as of the beginning of the measurement period.

The amortization period is calculated as the weighted average of expected remaining service lives assuming zero years for all inactive employees. Active employees include transfers from Union Service. Inactive employees include terminated vested and disabled employees, retirees and beneficiaries.

The amortization period for the June 30, 2015 to June 30, 2016 measurement period was 1.7, based on the following statistics.

As of June 30, 2015	Expected Remaining Service Lives	Employee Count
Active employees	6.932	126
Inactive employees	0.000	374

Exhibit 5 shows the total deferred inflows and outflows of resources as of June 30, 2016 along with a schedule showing the amounts that will be recognized in future years. All outstanding deferred inflows and outflows as of June 30, 2016 are shown on Exhibit 6.

## Pension Expense

The annual pension expense reflects changes in the net pension liability from the prior year to the current year, with limited smoothing for deferred items. Because GASB requires that a portion of the changes in the net pension liability due to gains and losses and assumption changes be reflected during the current fiscal year, the final pension expense for any year will not be known until after the fiscal year end. Exhibit 5 shows the pension expense for the fiscal year ending June 30, 2016.

The service cost shown on Exhibit 5 is based on the results of the July 1, 2015 GASB 67 and 68 Valuation. It is more than double the amount shown on Exhibit 5 in last year's report due to changes in the assumptions and methods effective July 1, 2015.

## Schedule of Employer Contributions

Exhibit 8 is a 10-year schedule of the actuarially determined contribution, contributions made in relation to the actuarially determined contribution and related ratios. It also summarizes the significant methods and assumptions that were used to develop the actuarially determined contribution.

## Money-Weighted Rate of Return

Exhibit 9 is calculation of the money-weighted rate of return net of investment expenses for the fiscal year ending June 30, 2016 assuming monthly cash flows occur at the end of each month.

## Long-Term Expected Rate of Return by Asset Class

Exhibit 10 provides the expected real rate of return for each asset class, excluding inflation. It is based on the capital market assumptions developed by Milliman's investment consulting practice as of December 31, 2015 and the Plan's investment policy adopted by the Plan's Board of Trustees and last amended December 8, 2015.

## Notes and Required Supplementary Information

GASB 67 and 68 require additional information be presented in the notes to the financial statements and required supplementary information (RSI). The attached exhibits relate to the actuarial disclosures of the Plan. Additional information related to the Plan provisions, census data, and assumptions and methods used for the actuarial disclosures may be found in the respective actuarial valuation reports for the applicable plan years.

## Exhibit 1

### Depletion Date Projection

In order to determine if the Plan's fiduciary net position is projected to be sufficient to make projected benefit payments, we have prepared a depletion date projection using the following techniques and assumptions:

- Benefit payments are projected based on the Plan provisions summarized in Appendix A and the actuarial assumptions and methods described in Appendix B. Projected benefit payments are shown in Appendix D.
- Administrative expenses are assumed to be \$100,000 for the 2015-2016 fiscal year, increasing 3% per year for each year benefit payments increase, and decreasing 2% per year thereafter.
- TriMet is assumed to contribute the actuarially determined contribution each year. The funding policy used to determine the actuarially determined contribution is assumed to not change in the future.

On February 26, 2014, TriMet's Board of Directors approved Resolution 14-02-06, formally adopting a pension funding policy for the Plan. This policy provides for an actuarially determined contribution based on the following parameters:

- Use of the entry age normal, level percentage of payroll actuarial cost allocation method
  - Five year smoothing of market value investment gains and losses, with the resulting smoothed asset value within 20% of market value
  - Long-term average annual investment return on plan assets (to be reviewed and updated as appropriate at least every 2 years).
  - Initial amortization period of 10 years, reducing one year annually.
- The 10-year amortization period was effective for the plan year ending June 30, 2014. The amortization period as of July 1, 2016 is 7 years.
  - All cash flows are assumed to occur on average halfway through the year.
  - The long-term expected rate of return on pension plan investments is 6.30%.

Future projections will yield different results as actual Plan experience becomes known.

## Exhibit 2

### Projection of Fiduciary Net Position and Discount Rate

Fiscal Year Beginning	Projected Beginning Fiduciary Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings	Projected Ending Fiduciary Net Position
7/1/2016	\$114,997,281	\$3,734,975	(\$5,014,495)	(\$100,000)	\$7,202,038	\$120,819,799
7/1/2017	120,819,799	3,590,804	(5,772,679)	(103,000)	7,540,773	126,075,697
7/1/2018	126,075,697	3,700,277	(6,433,959)	(106,090)	7,854,683	131,090,608
7/1/2019	131,090,608	4,302,661	(7,158,045)	(109,273)	8,166,748	136,292,699
7/1/2020	136,292,699	4,720,783	(7,799,510)	(112,551)	8,487,450	141,588,871
7/1/2021	141,588,871	4,725,443	(8,301,835)	(115,928)	8,805,568	146,702,119
7/1/2022	146,702,119	4,729,846	(8,767,183)	(119,406)	9,113,296	151,658,672
7/1/2023	151,658,672	606,294	(9,270,908)	(122,988)	9,281,915	152,152,985
7/1/2024	152,152,985	549,842	(9,711,024)	(126,678)	9,297,539	152,162,664
7/1/2025	152,162,664	503,654	(10,104,827)	(130,478)	9,284,382	151,715,395
7/1/2026	151,715,395	457,890	(10,510,675)	(134,392)	9,242,075	150,770,293
7/1/2027	150,770,293	410,367	(10,864,973)	(138,424)	9,169,944	149,347,207
7/1/2028	149,347,207	372,248	(11,236,651)	(142,577)	9,067,450	147,407,677
7/1/2029	147,407,677	344,033	(11,508,413)	(146,854)	8,935,822	145,032,265
7/1/2030	145,032,265	321,653	(11,748,041)	(151,260)	8,777,907	142,232,524
7/1/2031	142,232,524	296,493	(11,980,484)	(155,798)	8,593,392	138,986,127
7/1/2032	138,986,127	281,232	(12,141,376)	(160,472)	8,383,260	135,348,771
7/1/2033	135,348,771	264,215	(12,267,861)	(165,286)	8,149,506	131,329,345
7/1/2034	131,329,345	251,201	(12,384,577)	(170,245)	7,892,103	126,917,827
7/1/2035	126,917,827	240,575	(12,412,209)	(175,352)	7,612,833	122,183,674
7/1/2036	122,183,674	224,291	(12,375,023)	(171,845)	7,315,339	117,176,436
7/1/2037	117,176,436	206,595	(12,300,063)	(168,408)	7,001,765	111,916,325
7/1/2038	111,916,325	194,594	(12,157,553)	(165,040)	6,674,532	106,462,858
7/1/2039	106,462,858	182,849	(11,968,358)	(161,739)	6,336,569	100,852,179
7/1/2040	100,852,179	174,657	(11,724,215)	(158,504)	5,990,516	95,134,633
7/1/2041	95,134,633	166,235	(11,417,607)	(155,334)	5,639,658	89,367,585
7/1/2042	89,367,585	159,079	(11,058,763)	(152,227)	5,287,339	83,603,013
7/1/2043	83,603,013	152,853	(10,656,025)	(149,182)	4,936,566	77,887,225
7/1/2044	77,887,225	148,734	(10,200,446)	(146,198)	4,590,568	72,279,883
7/1/2045	72,279,883	142,888	(9,724,334)	(143,274)	4,251,983	66,807,146

**Projection Results:** The Plan's projected fiduciary net position over the next 30 years is shown above. Since the funding policy uses a closed amortization method, the Plan is projected to remain solvent.

**Discount Rate:** The discount rate for purposes of calculating liabilities in this report is equal to the expected long-term expected rate of return on plan assets, 6.30%.

## Exhibit 3

### Net Pension Liability

<b>Net Pension Liability</b>	<b>June 30, 2015</b>	<b>June 30, 2016</b>
Total pension liability	\$ 129,131,739	\$ 133,362,366
Fiduciary net position	<u>111,100,177</u>	<u>114,997,281</u>
Net pension liability	\$ 18,031,562	\$ 18,365,085
Fiduciary net position as a % of total pension liability	86.04%	86.23%
Covered payroll	\$ 12,751,216	\$ 12,722,153
Net pension liability as a % of covered payroll	141.41%	144.36%

The total pension liability was determined by an actuarial valuation as of the valuation date, calculated based on the discount rate and actuarial assumptions below.

#### Discount Rate

The Plan's fiduciary net position plus anticipated future contributions in adherence with the funding policy is projected to remain solvent. The single effective discount rate for purposes of calculating liabilities in this report is equal to the expected long-term expected rate of return on plan assets.

Discount rate	6.50%	6.30%
Long-term expected rate of return	6.50%	6.30%

#### Other Key Actuarial Assumptions

Valuation date	July 1, 2015	July 1, 2016
Measurement date	June 30, 2015	June 30, 2016
Inflation	2.75%	2.50%
Salary Increases	2.75%	2.75%
Cost-of-Living Adjustments	90% of inflation	90% of inflation
Mortality	RP-2014 Annuitant White Collar Mortality, projected, 10 years past valuation date using Scale BB, for males and females	RP-2014 Annuitant White Collar Mortality, projected, 10 years past valuation date using Scale BB, for males and females
Actuarial cost method	Entry Age Normal as Level % of Pay	Entry Age Normal as Level % of Pay

## Exhibit 4

### Changes in Net Pension Liability (June 30, 2015 to June 30, 2016)

Changes in Net Pension Liability	Increase (Decrease) Plan		
	Total Pension Liability (a)	Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances as of June 30, 2015	\$ 129,131,739	\$ 111,100,177	\$ 18,031,562
Changes for the year:			
Service Cost	1,224,152		1,224,152
Interest on total pension liability	8,326,815		8,326,815
Effect of plan changes	0		0
Effect of economic/demographic (gains) or losses	(1,292,524)		(1,292,524)
Effect of assumptions changes or inputs	474,280		474,280
Benefit payments	(4,502,096)	(4,502,096)	0
Administrative expenses		(96,799)	96,799
Member contributions		0	0
Net investment income		1,459,796	(1,459,796)
Employer contributions		7,036,203	(7,036,203)
Balances as of June 30, 2016	\$ 133,362,366	\$ 114,997,281	\$ 18,365,085

#### Sensitivity Analysis

The following presents the net pension liability of the Plan, calculated using the discount rate of 6.3%, as well as what the Plan's net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower (5.3%) or 1 percentage point higher (7.3%) than the current rate.

	1% Decrease 5.3%	Current Discount Rate 6.3%	1% Increase 7.3%
Total pension liability	\$151,277,886	\$133,362,366	\$118,460,463
Fiduciary net position	<u>114,997,281</u>	<u>114,997,281</u>	<u>114,997,281</u>
Net pension liability	\$ 36,280,605	\$ 18,365,085	\$ 3,463,182

## Exhibit 5

### Pension Expense

<b>Pension Expense</b>	<b>July 1, 2015 to June 30, 2016</b>
Service cost	\$ 1,224,152
Interest on total pension liability	8,326,815
Effect of plan changes	0
Administrative expenses	96,799
Member contributions	0
Expected investment return net of investment expenses	(7,279,232)
Recognition of Deferred (Inflows)/Outflows of Resources	
Recognition of economic/demographic (gains) or losses	68,605
Recognition of assumption changes or inputs	(223,595)
Recognition of investment (gains) or losses	763,687
<b>Pension Expense</b>	<b>\$ 2,977,231</b>

As of June 30, 2016, the deferred inflows and outflows of resources are as follows:

<b>Deferred Inflows / Outflows of Resources</b>	<b>Deferred Inflows of Resources*</b>	<b>Deferred Outflows of Resources*</b>
Differences between expected and actual experience	\$ (532,216)	\$ 0
Changes of assumptions or inputs	0	195,292
Net difference between projected and actual earnings	0	3,632,917
Contributions made subsequent to measurement date	0	0
<b>Total</b>	<b>\$ (532,216)</b>	<b>\$ 3,828,209</b>

\* *Deferred outflows of resources are presented as positive amounts. Deferred inflows of resources are presented as negative amounts.*

Other amounts currently reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended June 30:	Annual Recognition*
2017	\$ (659,004)
2018	623,585
2019	2,167,524
2020	1,163,888
2021	0
Thereafter	0

\* *Note that future deferred inflows and outflows of resources may impact these numbers.*

## Exhibit 6

### Schedule of Deferred Inflows and Outflows of Resources

	Original Amount	Date Established	Original Recognition Period*	Amount Recognized in Expense 06/30/2016	Balance of Deferred Inflows 06/30/2016	Balance of Deferred Outflows 06/30/2016
Investment (gains) or losses	\$ 5,819,436	06/30/2016	5.0	\$ 1,163,887	\$ 0	\$ 4,655,549
	5,018,193	06/30/2015	5.0	1,003,639	0	3,010,915
	(7,719,697)	06/30/2014	5.0	(1,543,939)	(3,087,880)	0
	(4,728,327)	06/30/2013	5.0	(945,665)	(945,667)	0
	5,428,829	06/30/2012	5.0	1,085,765	0	0
				\$ 763,687	\$ (4,033,547) **	\$ 7,666,464 **
Economic/demographic (gains) or losses	\$ (1,292,524)	06/30/2016	1.7	\$ (760,308)	\$ (532,216)	\$ 0
	3,591,955	06/30/2015	1.3	828,913	0	0
				\$ 68,605	\$ (532,216)	\$ 0
Assumption changes or inputs	\$ 474,280	06/30/2016	1.7	\$ 278,988	\$ 0	\$ 195,292
	(2,177,859)	06/30/2015	1.3	(502,583)	0	0
				\$ (223,595)	\$ 0	\$ 195,292

\* Investment (gains)/losses are recognized in pension expense over a period of five years; economic/demographic (gains)/losses and assumption changes or inputs are recognized over the weighted average of expected remaining service lives for all active and inactive participants.

\*\* In accordance with paragraph 33b of GASB 68, the balances of deferred inflows and outflows have been combined for reporting purposes (see Exhibit 5).



## Exhibit 7

### Schedule of Changes in Total Pension Liability, Fiduciary Net Position and Related Ratios

	Fiscal Year Ending June 30,									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>Total Pension Liability</b>										
Service cost	\$1,224,152	\$505,463	\$793,111	\$906,565	\$1,095,477	\$1,146,132	\$0	\$0	\$0	\$0
Interest on total pension liability	8,326,815	7,931,015	8,453,556	7,902,778	7,369,518	6,903,000	0	0	0	0
Effect of plan changes	0	0	0	1,711,031	0	0	0	0	0	0
Effect of assumption changes or inputs	474,280	(2,177,859)	(531,299)	1,015,215	263,570	90,260	0	0	0	0
Effect of economic/demographic (gains) or losses	(1,292,524)	3,591,955	(3,002,079)	151,873	2,405,026	1,508,268	0	0	0	0
Benefit payments	(4,502,096)	(4,457,981)	(3,892,235)	(3,519,261)	(3,134,099)	(2,730,827)	0	0	0	0
Net change in total pension liability	4,230,627	5,392,593	1,821,054	8,168,201	7,999,492	6,916,833	0	0	0	0
Total pension liability, beginning	129,131,739	123,739,146	121,918,092	113,749,891	105,750,399	98,833,566	0	0	0	0
Total pension liability, ending (a)	\$133,362,366	\$129,131,739	\$123,739,146	\$121,918,092	\$113,749,891	\$105,750,399	0	0	0	0
<b>Fiduciary Net Position</b>										
Employer contributions	\$7,036,203	\$6,559,317	\$5,601,963	\$9,775,840	\$3,007,677	\$5,615,481	\$0	\$0	\$0	\$0
Member contributions	0	0	0	0	0	0	0	0	0	0
Investment income net of investment expenses	1,459,796	2,003,914	14,073,839	10,099,943	(240,623)	12,367,428	0	0	0	0
Benefit payments	(4,502,096)	(4,457,981)	(3,892,235)	(3,519,261)	(3,134,099)	(2,730,827)	0	0	0	0
Administrative expenses	(96,799)	(123,346)	0*	0*	0*	0*	0	0	0	0
Net change in plan fiduciary net position	3,897,104	3,981,904	15,783,567	16,356,522	(367,045)	15,252,082	0	0	0	0
Fiduciary net position, beginning	111,100,177	107,118,273	91,334,706	74,978,184	75,345,229	60,093,147	0	0	0	0
Fiduciary net position, ending (b)	\$114,997,281	\$111,100,177	\$107,118,273	\$91,334,706	\$74,978,184	\$75,345,229	0	0	0	0
Net pension liability, ending = (a) - (b)	\$18,365,085	\$18,031,562	\$16,620,873	\$30,583,386	\$38,771,707	\$30,405,170	\$0	\$0	\$0	\$0
Fiduciary net position as a % of total pension liability	86.23%	86.04%	86.57%	74.91%	65.91%	71.25%	N/A	N/A	N/A	N/A
Covered payroll	\$12,722,153	\$12,751,216	\$13,141,852	\$14,199,937	\$14,868,526	\$15,390,172	\$0	\$0	\$0	\$0
Net pension liability as a % of covered payroll	144.36%	141.41%	126.47%	215.38%	260.76%	197.56%	N/A	N/A	N/A	N/A

\* Administrative expenses were included with investment income for fiscal years up through June 30, 2014.

This schedule is presented to illustrate the requirement to show information for 10 years. However, recalculations of prior years are not required, and if prior years are not calculated in accordance with the current GASB standards, they should not be reported.

## Exhibit 8

### Schedule of Employer Contributions (Dollar Amounts in Thousands)

	Fiscal Year Ending June 30,									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Actuarially determined contribution	\$ 4,242	\$ 4,219	\$ 4,957	\$ 5,135	\$ 4,834	\$ 4,576	N/A	N/A	N/A	N/A
Actual employer contribution	7,036	6,559	5,602*	9,776*	3,008*	5,615*	N/A	N/A	N/A	N/A
Contribution deficiency (excess)	(2,794)	(2,340)	(645)	(4,641)	1,826	(1,039)	N/A	N/A	N/A	N/A
Covered payroll	12,722	12,571	13,142	14,200	14,869	15,390	N/A	N/A	N/A	N/A
Contribution as a % of covered payroll	55.31%	51.44%	42.63%	68.84%	20.23%	36.49%	N/A	N/A	N/A	N/A
Valuation Date	7/1/2015	7/1/2014	7/1/2013	7/1/2012	7/1/2011	7/1/2010	N/A	N/A	N/A	N/A
Investment Rate of Return Assumption	6.50%	6.50%	6.50%	7.00%	7.00%	7.00%	N/A	N/A	N/A	N/A

\* Any receivable contributions that TriMet designated for a fiscal year which was already ended at the time of actual contribution was reallocated to the fiscal year during which the contribution was made.

#### Notes to Schedule

Methods and assumptions used to determine contribution rates

Actuarial Cost Method	Individual entry age normal, level percent of pay
Amortization Method	Effective July 1, 2013: Closed 10-year amortization, level dollar Effective July 1, 2008: Closed 20-year amortization, level dollar
Asset Valuation Method	Market value gains and losses smoothed over 5 years, with result not less than 80% or greater than 120% of market value
Healthy Mortality	Effective July 1, 2015: RP-2014 Annuitant Mortality Table with White Collar Adjustment for males and females, projected 10 years past the valuation date using Scale BB. No pre-retirement mortality. Prior to July 1, 2015: RP-2000 Static Mortality Table for males and females, Annuitant and Non-Annuitant, updated annually
Inflation	Effective July 1, 2015: 2.75% Effective July 1, 2014: 2.00% for first year, increasing 0.25% per year until 4.00% Effective July 1, 2010: 4.00%
Salary Increases	Effective July 1, 2015: 2.75% Effective July 1, 2014: 3.00% for the next five years, increasing 0.25% per year until 4.00% Effective July 1, 2010: 5.00%
Cost of Living Adjustments	90% of inflation (retirement after May 31, 1984)

## Exhibit 9

### Money-Weighted Rate of Return (Fiscal Year Ending June 30, 2016)

The money-weighted rate of return is the internal rate of return on plan assets based on the amounts and timing of actual cash flows. External cash flows (contributions, benefit payments and administrative expenses) are determined on a monthly basis and are assumed to occur at the end of each month. External cash inflows are netted with external cash outflows, resulting in a net external cash flow in each month. The money-weighted rate of return is calculated net of investment expenses.

	Net External Cash Flows	Periods Invested	Period Weight	Net External Cash Flows With Interest
Beginning Value - July 1, 2015	\$ 111,100,177	12.00	1.00	\$ 112,548,220
Monthly net external cash flows:				
July	172,400	11.00	0.92	174,466
August	169,332	10.00	0.83	171,162
September	144,404	9.00	0.75	145,813
October	171,219	8.00	0.67	172,711
November	166,291	7.00	0.58	167,545
December	161,201	6.00	0.50	162,248
January	171,600	5.00	0.42	172,536
February	159,927	4.00	0.33	160,612
March	158,744	3.00	0.25	159,259
April	160,753	2.00	0.17	161,107
May	156,516	1.00	0.08	156,678
June	644,924	0.00	0.00	644,924
Ending Value - June 30, 2016				\$ 114,997,281
Money-Weighted Rate of Return	1.30%			

### Schedule of Investment Returns

Fiscal Year Ending June 30,	Money-Weighted Rate of Return Net of Investment Expenses
2016	1.30%
2015	1.87
2014	15.62
2013	N/A
2012	N/A
2011	N/A
2010	N/A
2009	N/A
2008	N/A
2007	N/A
2006	N/A

## Exhibit 10

### Long-Term Expected Rate of Return by Asset Class

The best-estimate range for the long-term expected rate of return is determined by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation. The capital market assumptions shown are one-year arithmetic averages, excluding inflation, developed by Milliman's investment consulting practice as of December 31, 2015. The Plan's investment policy adopted by the Plan's Board of Trustees was last amended December 8, 2015.

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
Fixed Income	14.0%	2.1%
U.S. Large-Mid Cap Equities	21.5%	5.2%
U.S. Small Equities	2.5%	6.1%
Non-US Equities	17.0%	6.1%
Tactical Asset Allocation*	15.0%	4.0%
Absolute Return	14.0%	2.2%
Private Real Estate	7.0%	4.0%
Private Equity	2.0%	9.1%
Private Credit**	7.0%	4.3%

\* *Tactical Asset Allocation Strategies were assumed to be split 60% in Global Equity and 40% in Investment Grade Fixed Income.*

\*\* *Private Credit was assumed to have similar expected returns, volatility, and correlations as High Yield Bonds.*

# Appendix A

## Plan Provisions



This report was prepared solely for TriMet for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

## Plan Provisions

Plan provisions used were based on the plan document restated effective July 1, 2013.

### Name

TriMet Defined Benefit Retirement Plan for Management and Staff Employees.

### Effective Date

The Plan was originally adopted on December 7, 1970 and was last restated effective July 1, 2013.

### Eligibility

Prior to April 27, 2003: an employee became a participant upon being employed as an eligible employee and was regularly scheduled to work at least 20 hours per week.

On and after April 27, 2003: Employees hired on or after April 27, 2003 are not eligible to participate in this Plan. Active participants on April 27, 2003 with credited service prior to that date made an irrevocable election to either (1) continue earning benefits under this Plan after April 26, 2003 and not earn benefits under the Defined Contribution Plan, or (2) cease earning benefits under this Plan as of April 27, 2003 and earn future benefits under the Defined Contribution Plan.

Inactive participants who are rehired after April 26, 2003 may resume participation in the Plan if certain requirements are met. Employees hired prior to April 27, 2003 who are participants in the Pension Plan for Bargaining Unit Employees of TriMet ("Union Plan") may become participants in this Plan if they transfer to a management position.

An eligible employee is any management or staff (non-bargaining) common-law employee except those covered by a collective bargaining agreement that does not provide for participation to this Plan, leased employees, employees classified to work less than half time, employees hired on or after April 27, 2003, and employees who transferred their accrued benefit to the Defined Contribution Plan.

### Credited Service

Credited service includes all periods of service while a participant in the Plan, including military service, authorized vacation, periods of disability (if entitled to benefits under the TriMet Long-Term Disability Policy), periods of service in the Oregon State Legislative Assembly, authorized leave of absence (subject to return to work rules), part time work (i.e. at least 20 but less than 40 hours per week), and work for predecessor employers.

Credited service does not include periods in which TriMet is required to make contributions to Oregon PERS or to any other state mandated retirement program, periods in which the employee is covered by another TriMet retirement plan (including the Defined Contribution Plan and the Union Plan), and service prior to a break in service.

Periods of service are measured in years and whole months. Each twelve month period of credited service equals one year of credited service and partial years are based on the number of complete months worked divided by 12. Part-time employees earn partial credited service based on the percentage of full-time employment.

### Vesting Service

All credited service plus any period of service (not already counted as credited service) when an employee is entitled to payment for services rendered to TriMet, excluding service preceding a permanent break in service.

Periods of service are measured in years and whole months. Each twelve month period of vesting service equals one year of vesting service and partial years are based on the number of complete months worked divided by 12.

### Normal Retirement

(a) Eligibility

A vested participant may receive benefits at age 62, the normal retirement age.

(b) Basic Benefit

The basic benefit is a monthly benefit payable for life equal to 1/12 of 1.75% of final average salary multiplied by credited service. Certain executives who became participants on or before July 1, 2008 receive a different percentage of final average earnings.

Final average salary means 1/3 of the 36 highest consecutive months of base earnings. If the employee is totally disabled, final average salary includes only base earnings paid prior to the onset of disability. Final average salary during a period when an employee is part-time is the employee’s salary during the period divided by the percentage of time the part-time employee worked relative to a full time employee.

(c) Sick Leave Supplement

For participants who retire on or after July 1, 2000, hours of unused sick leave are converted to either a monthly annuity supplement or a lump sum distribution.

- The monthly annuity supplement is equal to 50% of hours of sick leave multiplied by the final average hourly rate, divided by 101.9.
- The lump sum distribution is equal to 50% of hours of sick leave multiplied by the final average hourly rate, multiplied by 1.107.

The final average hourly rate is the participant’s final average salary divided by 2,080.

Hours of sick leave are the lesser of the participant’s hours of unused sick leave or the maximum hours of sick leave from the table below.

<u>Effective</u>	<u>Maximum Hours of Sick Leave</u>
July 1, 2000	1,400 hours
March 22, 2005	1,500 hours
December 1, 2005	1,550 hours
December 1, 2006	1,600 hours
December 1, 2007	1,650 hours
December 1, 2008	1,700 hours



## Early Retirement

### (a) Eligibility

A participant may retire prior to his normal retirement date if he has 5 years of credited service and is at least 55 years of age.

### (b) Benefit

The normal retirement benefit is actuarially reduced based on the UP 1984 mortality table, adjusted to reflect a population that is 50% male and 50% female, and 7.5% interest.

## Forms of Payment

### (a) Single Life Annuity

### (b) 66 2/3% Joint and Survivor Annuity

### (c) Lump sum

## Disability Benefit

The Plan does not provide for a disability benefit. However, participants who become entitled to receive disability benefits under the TriMet Long-Term Disability Policy continue to earn credited service toward their normal retirement benefit while disabled.

## Vesting

A participant who attains the normal retirement age while active, or who earns at least five years of vesting service will be 100% vested.

## Contributions

Contributions are made to the Trust Fund by the funding policy established by TriMet. There are no participant contributions. The funding policy provides that the contribution will be determined in accordance with accepted actuarial principles.

## Pre-Retirement Death Benefit

The monthly payment payable to the surviving spouse or domestic partner of a vested participant is equal to the survivor portion of the 66 2/3% joint and survivor annuity which the spouse or domestic partner would have received had the participant retired at the time of his or her death (if eligible for retirement), otherwise as if the participant terminated employment on his or her date of death (if not already terminated), survived to the earliest age at which he or she could have elected to retire, retired with a 66 2/3% joint and survivor annuity, and died the following day.

The payment to the surviving spouse commences on the later of the participant's normal retirement date, or the participant's date of death. However, the spouse may commence actuarially reduced benefits following the earliest date the participant could have elected early retirement.

The payment to the domestic partner must commence no later than the December 31 of the calendar year following the participant's death. If the commencement date is earlier than the participant's age 55, the survivor benefit will be actuarial reduced to the commencement date.



## Post-Retirement Benefit Increases

Post-retirement benefits for participants who retire after May 31, 1984 are increased each April 1 by 90% of the percentage increase in the U.S. Urban Wage Earners and Clerical Workers Consumer Price Index (CPI-W) (annual average) for the previous calendar year. Annual increases will not be more than 7% per year and benefits will not be decreased if the annual CPI decreases.

## Plan Amendments since the Prior Valuation

None.

# Appendix B

## Actuarial Assumptions and Cost Method



This report was prepared solely for TriMet for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

## Actuarial Assumptions and Cost Method

This section of the report describes the actuarial procedures and assumptions used in this valuation. These procedures and assumptions have been chosen on the basis of recent experience of the Plan, published actuarial tables and on current and future expectations. Please see our letters regarding the assumptions dated May 14, 2015 and February 18, 2016 for additional detail regarding the development of these assumptions.

The assumptions are intended to estimate the future experience of the participants of the Plan and of the Plan itself in areas which affect the projected benefit flow and anticipated investment earnings. Any variations in future experience from that expected from these assumptions will result in corresponding changes in the estimated costs of the Plan's benefits.

### Records and Data

The data used in the valuation consist of employee data and financial information furnished by TriMet. All data for valuation purposes was accepted without audit.

### Adjustment for Incomplete Data

Records missing spouse gender assume the spouse is the opposite sex of the participant.

### Actuarial Cost Method

The accruing costs of all benefits are measured by the individual entry age normal actuarial cost method. The normal cost expressed as a level percentage of payroll.

Under this method, the total actuarial present value of projected benefits is allocated over the service for each active participant from their date of entry into the Plan until their assumed date of exit from the Plan, as a level percent of payroll. This level percent times payroll is referred to as the normal cost, and is calculated for each active participant. It is calculated by dividing each participant's total actuarial present value of projected benefits at entry age by the actuarial present value of projected salaries at entry age and multiplying this percentage by the participant's anticipated salary for the current plan year. The normal cost equals \$0 for non-active participants. The sum of the individual normal costs is the normal cost for the Plan.

The Plan's total pension liability is equal to the total actuarial present value of projected benefits less the actuarial present value of future normal costs. Net pension liability is equal to total pension liability minus the Plan's fiduciary net position.

### Fiduciary Net Position

The Plan's fiduciary net position is equal to the fair market value of the Plan's assets, as provided by TriMet.

### Long-term Expected Return on Plan Assets (effective July 1, 2016)

6.30% per annum compounded annually, net of investment management and custodial fees.

### Inflation (effective July 1, 2016)

2.50% per annum compounded annually.

### Administrative Expenses (effective July 1, 2016)

Annual administrative expenses of \$100,000 payable midyear are assumed.



This report was prepared solely for TriMet for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

### Annualized Salary

Pay rates for each active participant were provided by TriMet. Annual salary was calculated by multiplying the pay rate by 2,080 hours.

### Salary Increases (effective July 1, 2015)

Salaries are assumed to increase 2.75% per year.

### Post-Retirement Benefit Increases (effective July 1, 2016)

Benefits for retired participants and their beneficiaries are assumed to increase 2.25% per year each April 1.

### Decrement Timing (effective July 1, 2015)

Active and inactive participants are assumed to decrement (i.e. terminate, retire or die, as applicable) midyear.

### Mortality (effective July 1, 2015)

#### Pre-retirement and Pre-disability Mortality

None.

#### Post-retirement Mortality (Healthy Lives)

RP-2014 Annuitant Mortality Table with White Collar Adjustment for males and females, projected 10 years past the valuation date using Scale BB. This assumption includes a margin for future mortality improvement.

#### Disability Mortality

RP-2014 Disability Mortality Table for males and females, projected 10 years past the valuation date using Scale BB.

### Future Service Credits

Active and disabled participants are assumed to earn one year of credited service each year into the future. Active participants are assumed to earn one year of vesting service each year into the future.

### Form of Benefit (effective July 1, 2015)

All non-retired participants with a spouse or domestic partner are assumed to elect the following form of payment at retirement:

<u>Probability</u>	<u>Form of Payment</u>
50%	Single Life Annuity
50%	66 2/3% Joint & Survivor Annuity

Retired participants are valued according to the benefit form elected at retirement.

**Retirement from Active Status (effective July 1, 2015)**

All active and disabled participants are assumed to retire by age 67. A certain percentage of active participants are assumed to elect retirement beginning at age 55. The rates of retirement are as follows:

<u>Age</u>	<u>Annual Rate</u>	<u>Age</u>	<u>Annual Rate</u>
55 - 57	2%	62	35%
58 - 60	7	63-66	30
61	15	67	100

**Retirement from Inactive Status**

Terminated vested participants are assumed to retire at age 62, or present age if greater.

**Future Disabilities (effective July 1, 2015)**

None.

**Withdrawal (effective July 1, 2015)**

Participants are assumed to leave active employment for reasons other than retirement and death. Sample withdrawal rates are shown below:

<u>Years of Vesting Service</u>	<u>Annual Rate</u>
Less than 2	12.0%
3-4	9.0
5-6	5.0
7-10	3.5
11-15	2.5
16 and more	1.0

**Unused Sick Leave Benefits (effective July 1, 2015)**

Active participants are assumed to accumulate a percentage of the maximum accumulated sick leave hours in effect at retirement, based on the following schedule:

<u>Years of Credited Service</u>	<u>Sick Bank Hours</u>
Less than 10	0
10 – 14	600
15 – 19	850
20 – 24	1,100
25 – 29	1,200
30 and more	1,400

The schedule of maximum accumulated sick leave hours is shown in Appendix A.

**Spouse’s Age (effective July 1, 2015)**

Males are assumed to be three years older than their spouses or domestic partners. Females are assumed to be two years younger than their spouses or domestic partners.



## Changes in Actuarial Methods and Assumptions

The long-term expected return on plan assets was lowered from 6.50% to 6.30% to reflect updated economic expectations.

The inflation assumption was lowered from 2.75% to 2.50% to reflect updated economic expectations.

Post-retirement benefit increases were updated to reflect the change in the inflation assumption.

The assumption for administrative expenses was increased from \$90,000 to \$100,000 to reflect anticipated experience.

# Appendix C

## Participant Information



This report was prepared solely for TriMet for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

## Participant Information

The current actuarial valuation was based upon the participant data provided by TriMet.

All participants who have met the Plan's eligibility requirements as of the valuation date were included in the valuation. This includes participants who transferred to the Union Plan as well as inactive participants who are entitled to an immediate or deferred vested benefit. Employees that received a lump sum distribution or who transferred their accrued benefit to the Defined Contribution Plan were excluded from the valuation.

The following pages summarize the data used for this valuation together with comparable figures from prior valuations. The reconciliation of the data from last year to this year is provided below.

	Active Participants	Leaves and Disabled	Transfers	Terminated Vested	Retirees and Beneficiaries
From 6/30/2015 Valuation Report	141	3	26	96	234
Adjustments/Reclassifications	0	0	0	0	0
<b>6/30/2015</b>	<b>141</b>	<b>3</b>	<b>26</b>	<b>96</b>	<b>234</b>
Transfer to Union	0	0	0	0	0
Transfer to Management	1	0	(1)	0	0
Reinstated	0	0	0	0	0
Terminated with Vesting	(3)	0	0	3	0
Terminated without Vesting	0	0	0	0	0
Commenced Benefit	(10)	0	(2)	(7)	19
Long Term Disability	0	0	0	0	0
Lump Sum Distribution	0	0	0	0	0
Died	0	0	0	(1)	(4)
New Beneficiaries	0	0	0	0	1
<b>6/30/2016</b>	<b>129</b>	<b>3</b>	<b>23</b>	<b>91</b>	<b>250</b>



Historic Valuation Data

	6/30/2016	6/30/2015	6/30/2014*	6/30/2013*	6/30/2012*	6/30/2011*	6/30/2010*	6/30/2009*	6/30/2008*
(1) Active Employees Submitted	425	424	424	429	407	407	390	432	435
(a) Not Eligible	296	283	271	265	227	222	200	222	210
(2) Number of Employees Valued									
(a) Active Employees									
(i) Participants Accruing Credited Services	114	126	137	147	163	168	173	192	205
(ii) Frozen Credited Service	<u>15</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>17</u>	<u>17</u>	<u>17</u>	<u>18</u>	<u>20</u>
(iii) Total	129	141	153	164	180	185	190	210	225
(b) Retirees and Beneficiaries	250	234	223	203	180	156	151	140	123
(c) Terminated Vested Participants	91	96	95	105	114	117	118	118	124
(d) Transfers to Union	23	26	29	31	34	33	36	35	34
(e) Leave of Absence	0	0	0	0	0	0	0	0	0
(f) Disability	<u>3</u>	<u>3</u>	<u>3</u>	<u>4</u>	<u>4</u>	<u>3</u>	<u>3</u>	<u>5</u>	<u>6</u>
(g) Total Participants Valued	496	500	506	509	515	497	502	512	515
(3) Payroll of Active Participants	\$12,008,845	\$12,601,695	\$13,141,852	\$14,199,937	\$14,868,526	\$15,390,172	\$15,626,270	\$17,129,704	\$17,842,177
Percent Increase (Decrease)	(4.70%)	(4.11%)	(14.61%)	(7.73%)	(3.39%)	(1.51%)	(8.78%)	(3.99%)	(9.17%)
(4) Average Annual Earnings									
Active Participants	\$93,092	\$89,374	\$85,894	\$86,585	\$82,603	\$83,190	\$82,244	\$81,570	\$79,299
Percent Increase	4.16%	4.05%	(0.80%)	4.08%	(0.71%)	1.15%	0.83%	1.73%	(1.10%)

\* Data prior to June 30, 2015 were from previous valuation reports prepared by SilverStone Heintzberger Group.



This report was prepared solely for TriMet for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

Historic Characteristics of Population

	2016	2015	2014*	2013*	2012*	2011*	2010*	2009*	2008*	2007*	2006*
(1) Active Participants											
(a) Number	129	141	153	164	180	185	190	210	225	245	265
(b) Vested Participants	129	141	153	164	180	185	190	210	225	239	245
(c) Average Age	55.7	55.3	54.8	54.2	53.7	53.6	52.8	52.0	51.3	50.9	49.7
(d) Average Vesting Service	23.2	22.4	21.3	20.5	19.3	18.7	17.9	16.9	16.0	15.4	14.7
(e) Average Annual Earnings	\$93,092	\$89,374	\$85,894	\$86,585	\$82,603	\$83,190	\$82,244	\$81,570	\$79,299	\$80,181	\$75,169
(2) Terminated Vested Participants											
(a) Number	91	96	98	107	117	120	122	122	127	127	127
(b) Average Age	56.7	56.2	55.3	55.3	55.2	54.6	54.0	53.4	53.5	52.7	52.1
(c) Average Age at Termination	42.2	41.7	41.1	41.1	41.5	37.8	41.8	41.8	41.9	-	-
(d) Average Deferred Monthly Benefit	\$874	\$811	\$824	\$750	\$765	\$711	\$741	\$704	\$662	\$569	\$602
(3) Transfers to Union											
(a) Number	23	26	29	31	34	33	36	35	34	35	40
(b) Average Age	54.9	54.2	55.3	54.5	54.2	55.4	54.7	53.9	53.5	51.8	51.9
(c) Average Years of Management Service	4.5	4.9	5.6	5.5	5.6	6.6	6.6	5.8	5.2	N/A	N/A
(d) Average Annual Earnings	\$65,149	\$64,349	\$62,987	\$63,290	\$63,553	\$61,607	\$56,247	\$57,118	\$55,553	N/A	N/A
(4) Retires and Beneficiaries											
(a) Number	250	234	223	203	180	156	151	140	123	106	98
(b) Average Age	69.9	69.4	69.5	69.5	69.3	69.5	69.0	68.5	68.6	66.3	68.3
(c) Average Age at Retirement	61.6	61.5	61.6	61.5	61.4	61.1	61.1	61.1	60.9	-	-
(d) Average Monthly Benefit	\$1,545	\$1,519	\$1,507	\$1,503	\$1,483	\$1,368	\$1,221	\$1,117	\$1,114	\$1,087	\$1,026
(5) Other Inactive											
(a) Leave of Absence	0	0	0	0	0	0	0	0	0	0	0
(b) Disability	3	3	3	4	4	3	3	5	6	7	6
(6) Total Participants	496	500	506	509	515	497	502	512	515	520	536

\* Data prior to June 30, 2015 were from previous valuation reports prepared by SilverStone Heintzberger Group.



This report was prepared solely for TriMet for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

# Appendix D

## Projected Benefit Payments



This report was prepared solely for TriMet for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

**Projected Benefit Payments\***  
**July 1, 2016**

<b>Fiscal Year Beginning July 1,</b>	<b>Benefit Payment</b>	<b>Fiscal Year Beginning July 1,</b>	<b>Benefit Payment</b>	<b>Fiscal Year Beginning July 1,</b>	<b>Benefit Payment</b>
2016	\$5,014,495	2049	\$7,554,363	2082	\$16,006
2017	5,772,679	2050	7,001,827	2083	10,675
2018	6,433,959	2051	6,459,317	2084	6,962
2019	7,158,045	2052	5,932,120	2085	4,433
2020	7,799,510	2053	5,424,412	2086	2,756
2021	8,301,835	2054	4,939,244	2087	1,668
2022	8,767,183	2055	4,478,745	2088	985
2023	9,270,908	2056	4,044,185	2089	567
2024	9,711,024	2057	3,636,162	2090	319
2025	10,104,827	2058	3,254,617	2091	175
2026	10,510,675	2059	2,899,309	2092	93
2027	10,864,973	2060	2,569,663	2093	49
2028	11,236,651	2061	2,264,910	2094	25
2029	11,508,413	2062	1,984,435	2095	13
2030	11,748,041	2063	1,727,441	2096	6
2031	11,980,484	2064	1,493,222	2097	3
2032	12,141,376	2065	1,281,076	2098	2
2033	12,267,861	2066	1,090,072	2099	1
2034	12,384,577	2067	919,392	2100	0
2035	12,412,209	2068	768,144	2101	0
2036	12,375,023	2069	635,351		
2037	12,300,063	2070	519,959		
2038	12,157,553	2071	420,815		
2039	11,968,358	2072	336,553		
2040	11,724,215	2073	265,845		
2041	11,417,607	2074	207,262		
2042	11,058,763	2075	159,355		
2043	10,656,025	2076	120,738		
2044	10,200,446	2077	90,091		
2045	9,724,334	2078	66,116		
2046	9,202,427	2079	47,710		
2047	8,661,633	2080	33,808		
2048	8,110,617	2081	23,498		

\* This is a closed group projection of benefit payments based on the plan participants as of the valuation date.