

Pension Plan for Bargaining Unit Employees of TriMet

Actuarial Valuation Report as of June 30, 2023

Produced by Cheiron

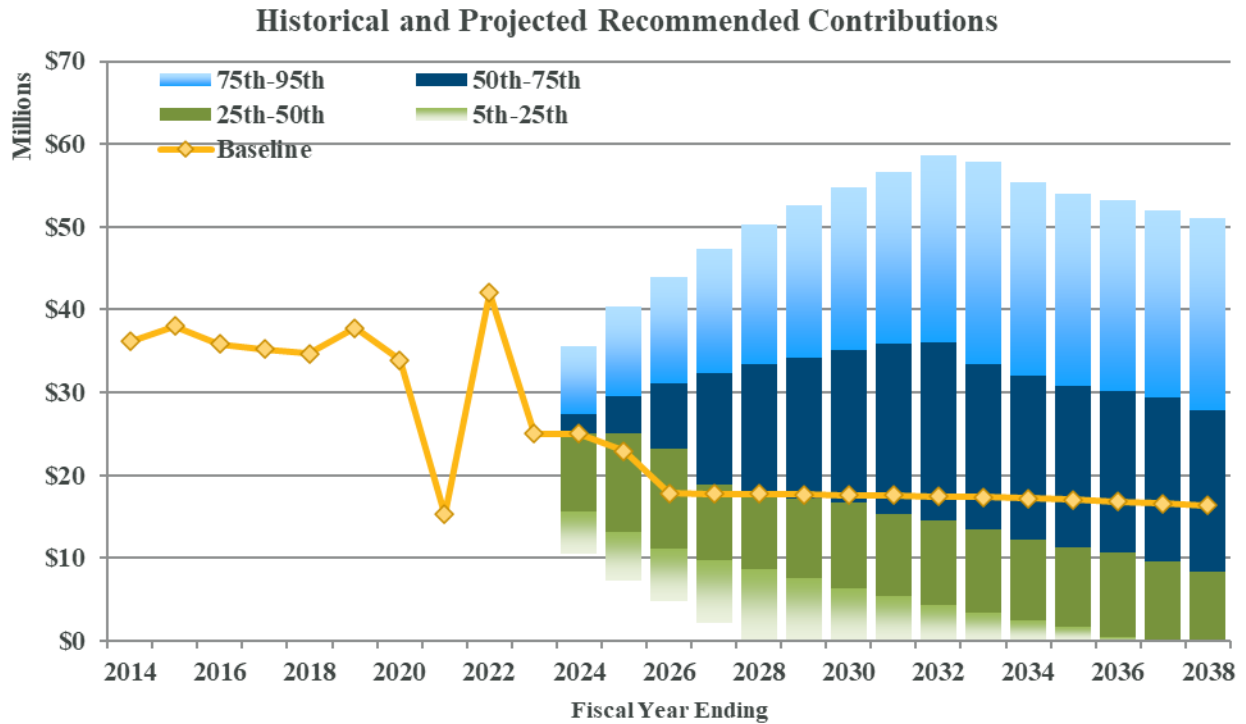
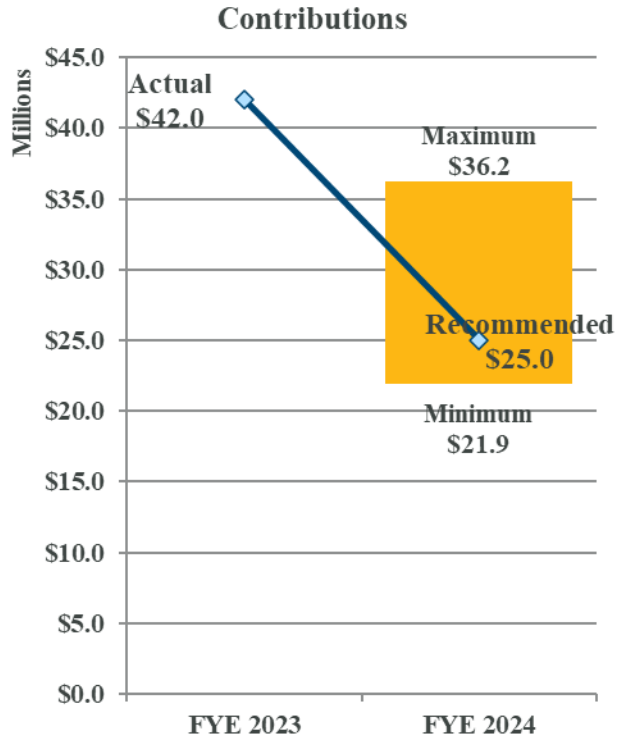
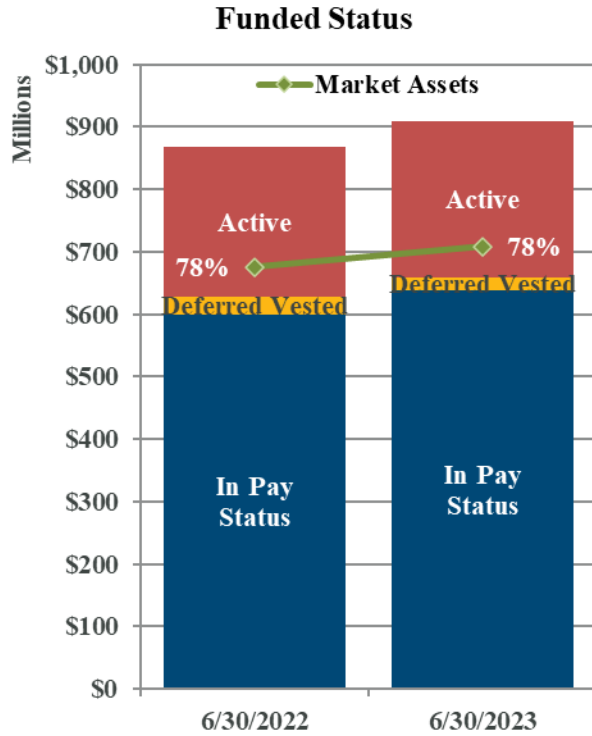
September 2023

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**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

SECTION I – BOARD SUMMARY



**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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Funded Status

The chart in the upper left corner of the dashboard on the prior page shows the assets, Actuarial Liability, and funded status for the current and prior valuations. These measures are for the purpose of assessing funding progress in a budgeting context and are not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan’s benefit obligations. For many pension plans, the liability measures for financial reporting under GASB 67 and 68 are different, but for TriMet, they are the same.

The bars represent the Actuarial Liability (or Total Pension Liability), which is used as a funding target, and are separated between the liability for members currently receiving benefits (dark blue), inactive members entitled to future benefits (gold), and active members (red). About 70% of the liability is for members currently receiving benefits. The green line shows the Market Value of Assets (or Fiduciary Net Position). The percentage on the top of the bar represents the funded status, which increased from 77.8% to 78.0%.

Table I-1 below summarizes the Actuarial Liability, assets, and funded status as of June 30, 2022 and 2023.

Table I-1

Summary of Funded Status			
	June 30, 2023	June 30, 2022	% Change
Actuarial Liability			
Actives	\$ 249,785,703	\$ 241,337,628	3.5%
Deferred Vested	19,998,028	28,536,943	-29.9%
In Pay Status	<u>638,630,175</u>	<u>598,379,860</u>	<u>6.7%</u>
Total	\$ 908,413,906	\$ 868,254,431	4.6%
Market Value of Assets	\$ 708,822,532	\$ 675,579,582	4.9%
Unfunded Actuarial Liability	\$ 199,591,374	\$ 192,674,849	3.6%
Funding Ratio	78.0%	77.8%	0.2%

The Market Value of Assets as of June 30, 2022 includes a contribution receivable of \$9,263,220.

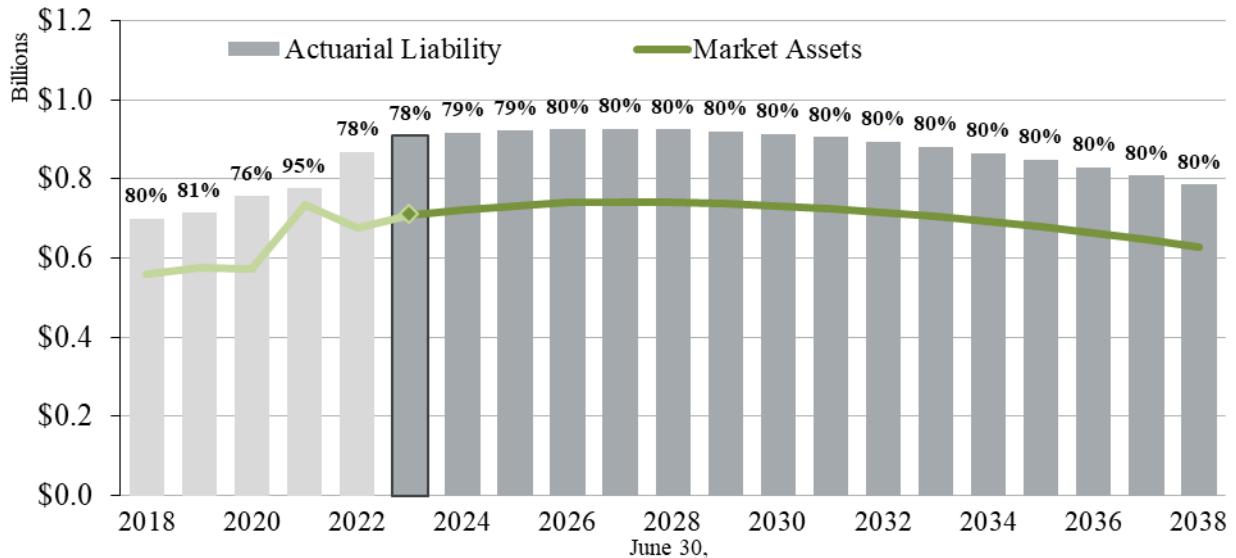
The Actuarial Liability represents the target amount of assets the plan should have in the trust as of the valuation date based on the actuarial cost method. In aggregate, the Actuarial Liability increased 4.6%, primarily reflecting larger-than-expected benefit rate and COLA increases. The Market Value of Assets increased 4.9% due to contributions, including a receivable contribution of \$9,263,220, and investment returns offset by benefit payments and expenses. As a result, the Unfunded Actuarial Liability (UAL) increased from approximately \$192.7 million to \$199.6 million.

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The chart below shows the historical and projected assets compared to the Actuarial Liability and shows the progress of the funding ratios. The historical Actuarial Liability is shown in light gray while the projected Actuarial Liability is shown in a darker gray. If all assumptions are met in the future and contributions are made in accordance with the recommended funding policy, the funded status is expected to reach and maintain a level of 80%. As the Actuary Liability starts to decline, the Unfunded Actuarial Liability is also expected to decline.

Historical and Projected Assets and Actuarial Liability



More detail on the assets can be found in section IV of this report, and more detail on the measures of liability can be found in section V of this report.

Contributions and Pension Expense

The chart in the upper right corner of the dashboard on page 1 shows the range (gold bars) from the minimum to maximum and the Recommended Actuarially Determined Contribution (ADC) assuming it is paid monthly throughout the year. For FYE 2023, the Plan was under the prior TriMet funding policy, which required a contribution of \$40.7 million, (\$42.0 million as of fiscal year end). Because the Plan is less than 80% funded as of June 30, 2023, the minimum contribution for FYE 2024 includes a 10-year amortization payment to return the Plan to 80% funded. However, we recommend that TriMet contribute its full budget for the pension and OPEB trusts of \$25.0 million in order to accelerate the improvement of the funded status. To the extent funds are available TriMet may want to consider a contribution up to the maximum of \$36.2 million, which, if all assumptions are met, would be sufficient to restore the Plan to 80% funded.

The Tread Water Cost is the normal cost plus interest on the UAL. The normal cost represents the expected cost of the benefits attributed to the next year of service, and the interest on the UAL represents the amount that would need to be contributed to keep the UAL at the same

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dollar amount if all assumptions are met. To the extent contributions exceed the Tread Water Cost, the UAL is expected to decline. For FYE 2024, the Tread Water Cost is approximately \$20.3 million, which is less than the minimum, maximum, and recommended contributions.

Under GASB 68, the annual pension expense equals the Tread Water Cost plus the cost of any benefit changes and the recognized portion of prior experience gains and losses and assumption changes. Details of this calculation are shown in Section VII of the report.

Table I-2 compares the ADC to actual contribution amounts and pension expense for the fiscal years ending in 2022 and 2023. The pension expense increased from \$51.9 million for FYE 2022 to \$67.2 million for FYE 2023, while the ADC increased from \$26.5 million to \$40.7 million.

Table I-2

Annual Contributions and Pension Expense					
	FYE 2023		FYE 2022		% Change
Pension Expense (\$ Amount)	\$	67,196,994	\$	51,859,006	29.6%
Actuarially Determined Contribution ¹	\$	40,658,448	\$	26,460,096	53.7%
Actual Contribution		<u>51,268,158</u>		<u>6,041,222</u>	748.6%
Contribution Deficiency/(Excess)	\$	(10,609,710)	\$	20,418,874	

¹ Amounts assume monthly contributions made throughout the year

Actual contributions exceeded the ADC by \$10.6 million in FYE 2023 due to the payment of the minimum contribution under the Working Wage Agreement after June 30, 2022. For FYE 2022, the actual contribution was less than the ADC both due to the delay in making the minimum contribution and the application of a cutoff for contributions based on the Plan’s funded ratio exceeding 93%. For the years preceding 2022, actual contributions exceeded the ADC each year.

For FYE 2024 and in the future, the projections in the chart at the bottom of the dashboard (page 1) assume that the Recommended ADC under the new funding policy is contributed. The baseline represents the projected Recommended ADC if all assumptions are met, and contributions are made in accordance with that policy. The baseline projection shows a decline in future contributions as the Plan reaches 80% funded followed by a relatively level contribution needed to maintain that funded status. The range of the bars represents the potential range of the Recommended Contribution based on the potential range of investment returns. There is a wide range of projected contributions although it is narrower than under the prior funding policy. For these projections, we used an expected return of 6.25% and a standard deviation of 10.70%¹.

¹ Standard deviation provided in Meketa’s April 17, 2023 Board of Trustees meeting materials.

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Section II of this report provides information on the risks to contribution amounts and Section VI of this report provides additional detail on the development of the ADC under both policies.

Changes

During FYE 2023, the UAL based on the Market Value of Assets increased by \$6.9 million. Table I-3 below shows the breakdown of the changes in the UAL in the last year by source.

Table I-3

Changes in UAL	
	Amount
UAL, June 30, 2023	\$ 199,591,374
UAL, June 30, 2022	<u>192,674,849</u>
Change in UAL	\$ 6,916,525
<u>Sources of Changes</u>	
Plan Changes	\$ 0
Assumption Changes	0
Contributions vs. Tread Water Cost	(22,526,612)
Investment (gain) or loss	(3,990,939)
Liability (gain) or loss	
Benefit Rates	11,083,636
Retiree COLA experience	23,284,790
Other experience	<u>(934,350)</u>
Total Liability (gain) or loss	\$ 33,434,076
Total Changes	\$ 6,916,525

The UAL as of June 30, 2022 includes a receivable contribution of \$9,263,220.

The largest increase in the UAL was \$23.3 million due to retiree COLA experience followed by the \$11.1 million increase due to the benefit rate increase. Both of these losses can be attributed to recent price inflation. The large level of contributions reduced the UAL by \$22.5 million and investment returns reduced the UAL by about \$4.0 million. Finally, other liability experience reduced the UAL by approximately \$0.9 million.

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Table I-4 below provides a summary of the results of this valuation compared to the prior valuation.

Table I-4

Summary of Valuation Results			
	June 30, 2023	June 30, 2022	% Change
Membership			
Actives	782	883	-11.4%
Deferred	137	133	3.0%
In Pay Status	<u>2,240</u>	<u>2,187</u>	2.4%
Total	3,159	3,203	-1.4%
Active Member Payroll	\$ 63,747,864	\$ 66,789,401	-4.6%
Actuarial Liability or Total Pension Liability	\$ 908,413,906	\$ 868,254,431	4.6%
Market Value of Assets or Plan Fiduciary Net Position ¹	<u>708,822,532</u>	<u>675,579,582</u>	4.9%
Unfunded Actuarial Liability or Net Pension Liability ¹	\$ 199,591,374	\$ 192,674,849	3.6%
Deferred Outflows of Resources	(34,545,563)	(50,821,604)	-32.0%
Deferred Inflows of Resources	<u>6,368,497</u>	<u>4,369,007</u>	45.8%
Net Impact on Statement of Net Position	\$ 171,414,308	\$ 146,222,252	17.2%
Funding Ratio	78.0%	77.8%	0.2%
	FYE 2024	FYE 2023	
<u>Actuarially Determined Contributions²</u>			
TriMet Policy	N/A	\$ 40,658,448	
Historical Policy	N/A	\$ 25,470,552	
Minimum Contribution	\$ 21,879,204	N/A	
Maximum Contribution	\$ 36,221,004	N/A	
Recommended Contribution	\$ 24,999,996	N/A	

¹ For GASB purposes, the contribution for FYE 2022 made after June 30, 2022 is not recognized until FYE 2023, so on June 30, 2022 the Plan Fiduciary Net Position is \$666,316,362 and the NPL is \$201,938,069.

² Contribution amounts assume monthly contributions made throughout the year

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Actuarial valuations are based on a set of assumptions about future economic and demographic experience. These assumptions represent a reasonable estimate of future experience, but actual future experience will undoubtedly be different and may be significantly different. This section of the report is intended to identify the primary risks to the plan, provide some background information about those risks, and provide an assessment of those risks.

Identification of Risks

The fundamental risk to a pension plan is that the contributions needed to pay the benefits become unaffordable. While we believe it is unlikely that the closed Plan by itself would become unaffordable, the contributions needed to support the Plan may differ significantly from expectations. While there are several factors that could lead to contribution amounts deviating from expectations, we believe the primary sources are:

- Investment risk,
- Inflation risk, and
- Contribution risk.

Other risks that we have not identified may also turn out to be important.

Investment Risk is the potential for investment returns to be different than expected. Lower investment returns than anticipated will increase the Unfunded Actuarial Liability necessitating higher contributions in the future unless there are other gains that offset these investment losses. In contrast, higher investment returns than anticipated may create a potentially significant surplus that could be difficult to use until all benefits have been paid. Expected future investment returns and their potential volatility are determined by the Plan's asset allocation.

Inflation risk is the potential for actual inflation to be different than expected. Retirement benefits under the plan are increased each year by 90% or 100% of inflation (CPI-W) depending upon retirement date. Higher inflation than expected will result in the payment of greater benefits, and lower inflation than expected will result in the payment of lower benefits.

Contribution risk is the potential for actual future Minimum actuarially determined contributions under the new funding policy to deviate from expected future contributions to an extent that they become unaffordable. The Recommended and Maximum contributions under the new funding policy are intended to signal when higher contributions may be appropriate in order to reduce the risk of high and potentially unaffordable future Minimum contributions.

The table on the next page shows a 10-year history of changes in the UAL based on the Market Value of Assets by source.

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Table II-1

UAL Change by Source						
FYE	Plan Changes	Assumption Changes	Contributions vs. Tread		Liability Experience	Total UAL Change
			Water	Investments		
2014	\$ 0	\$ 29,476	\$ (20,464)	\$ (36,496)	\$ (11,294)	\$ (38,778)
2015	0	(16,558)	(12,602)	19,270	(541)	(10,431)
2016	0	18,776	(16,375)	30,755	(8,966)	24,190
2017	0	0	(12,799)	(14,722)	(19,615)	(47,136)
2018	3,286	0	(16,275)	(6,367)	20,936	1,580
2019	0	0	(15,850)	19,087	(2,453)	784
2020	0	34,129	(20,002)	34,973	(5,374)	43,726
2021	0	3,945	(14,170)	(133,928)	3,365	(140,788)
2022	900	68,817	(4,270)	72,727	12,727	150,901
2023	0	0	(22,526)	(3,991)	33,434	6,917
Total	\$ 4,186	\$ 138,585	\$ (155,333)	\$ (18,692)	\$ 22,219	\$ (9,035)

Amounts in Thousands

Over the last 10 years, the UAL has been reduced by approximately \$9.0 million. Contributions reduced the UAL by \$155.3 million, and investment returns reduced the UAL by \$18.7 million; while liability experience increased the UAL by \$22.2 million, plan changes increased the UAL by \$4.2 million, and assumption changes increased the UAL by \$138.6 million.

Plan Maturity Measures

The future financial condition of a mature pension plan is more sensitive to each of the risks identified above than a less mature plan. Before assessing each of these risks, it is important to understand the maturity of the plan.

Plan maturity can be measured in a variety of ways, but there is one very important dynamic – the larger the plan is compared to the contribution or revenue base that supports it; the more sensitive the plan will be to risk. Given that the Plan has been closed to new entrants since 2012, maturity measures isolated on the Plan show significant increases in maturity.

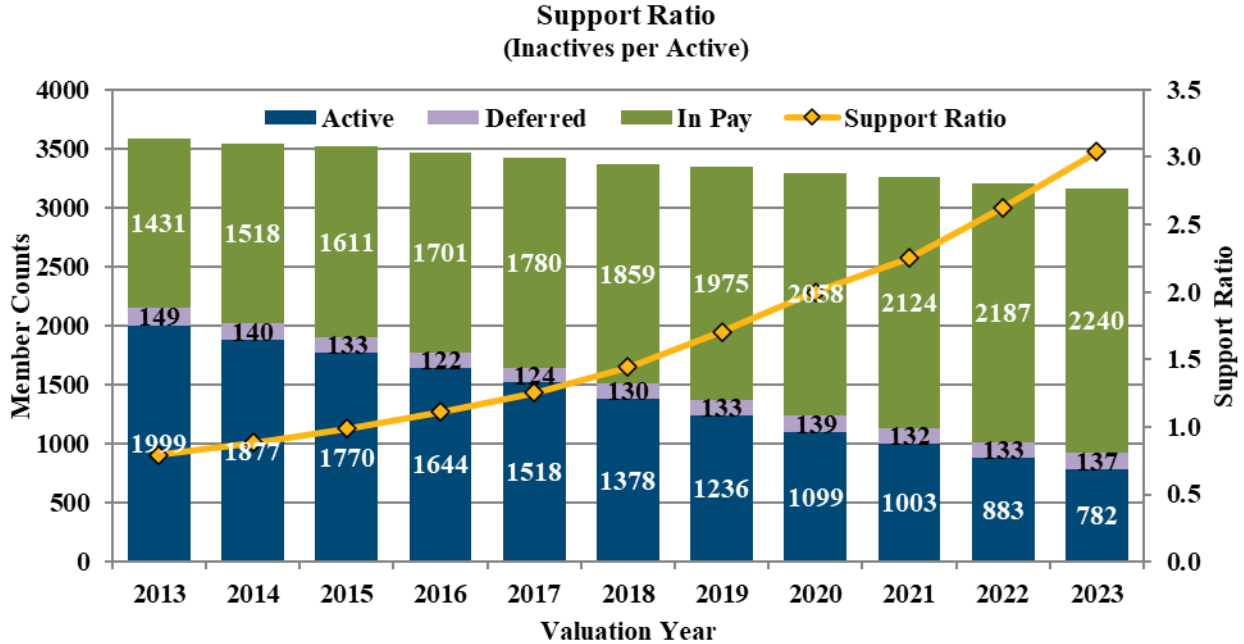
Support Ratio (Inactives per Active)

One simple measure of plan maturity is the ratio of the number of inactive members (those receiving benefits or entitled to a deferred benefit) to the number of active members. For a closed plan, the Support Ratio is expected to increase significantly unless active employees who are not

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covered by the Plan are included. The chart below shows the growth in the Support Ratio for the closed Plan for the current and prior 10 years.



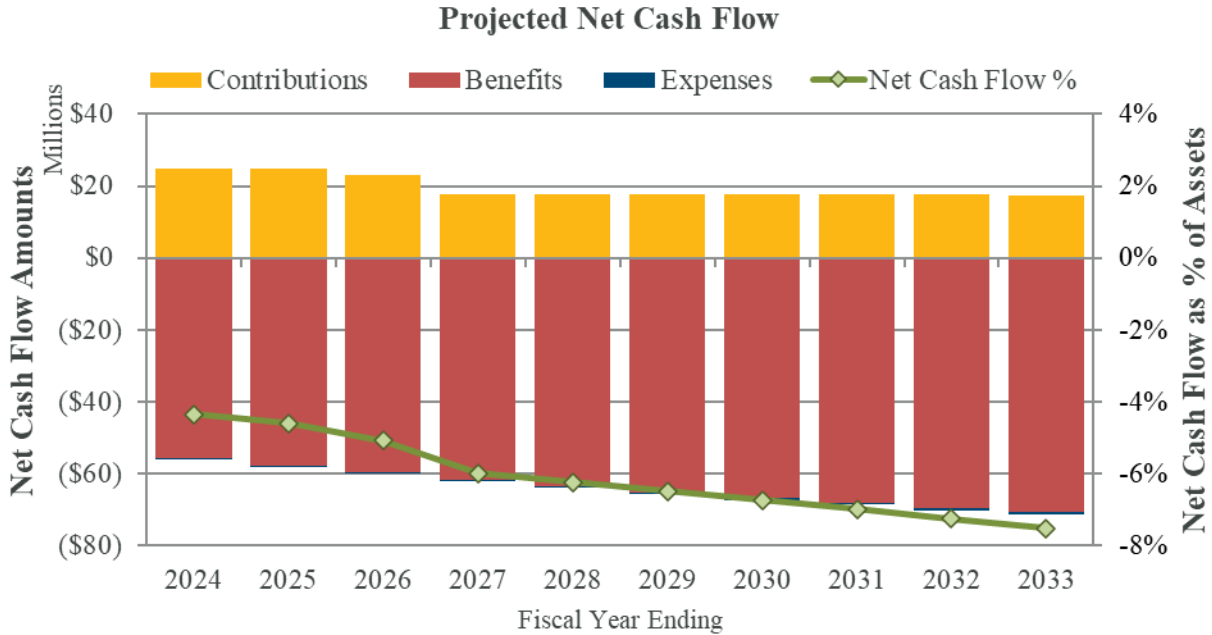
Net Cash Flow

The net cash flow of the plan as a percentage of the beginning of year assets indicates the need for liquidity and the sensitivity of the plan to short-term investment returns. Net cash flow is equal to contributions less benefit payments and administrative expenses. Mature plans can have large amounts of benefit payments compared to contributions, particularly if they are well funded.

The chart on the following page shows the projected net cash flow for the next 10 fiscal years assuming contributions are equal to the Recommended Contribution based on the new funding policy. The bars represent the dollar amounts of the different components of the projected net cash flow, and the line represents the net cash flow as a percentage of the assets as of the beginning of the fiscal year.

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While TriMet was contributing larger amounts to improve the funded status of the Plan, the net cash flow had been positive or only slightly negative except for FYE 2022 when contributions were reduced, and the net cash flow reached negative \$31.7 million. TriMet’s large contribution in FYE 2023 reversed the trend, but in the future as benefit payments continue to grow, if TriMet contributes the Recommended Contribution under the new funding policy, the cash flow is expected to become increasingly negative growing from about -4.4% of assets in FYE 2024 to -7.5% of assets in FYE 2033.

The first issue this change presents to the Plan is an increased need for liquidity in the investments so that benefits can be paid. When the cash flow was positive or close to neutral, benefits could be paid out of contributions without liquidating investments. As net cash flow becomes increasingly negative, the benefit payments will require liquidation of some investments to the extent the investment portfolio doesn’t generate sufficient cash income.

The other change of note is the sensitivity to short-term investment returns. Investment losses in the short term are compounded by the net withdrawal from the plan leaving a smaller asset base to try to recover from the investment losses. On the other hand, large investment gains in the short term also tend to have a longer beneficial effect as any future losses are relative to a smaller liability base due to the negative cash flow.

Assessing Costs and Risks

A closed pension plan will ultimately either end up with excess assets after all benefits have been paid or run out of assets before all benefits have been paid. If the Plan develops surplus assets, it may be able to reduce the risk in its investment portfolio, immunize investments, or purchase annuities to settle the remaining obligation. If the surplus assets exceed the additional amounts

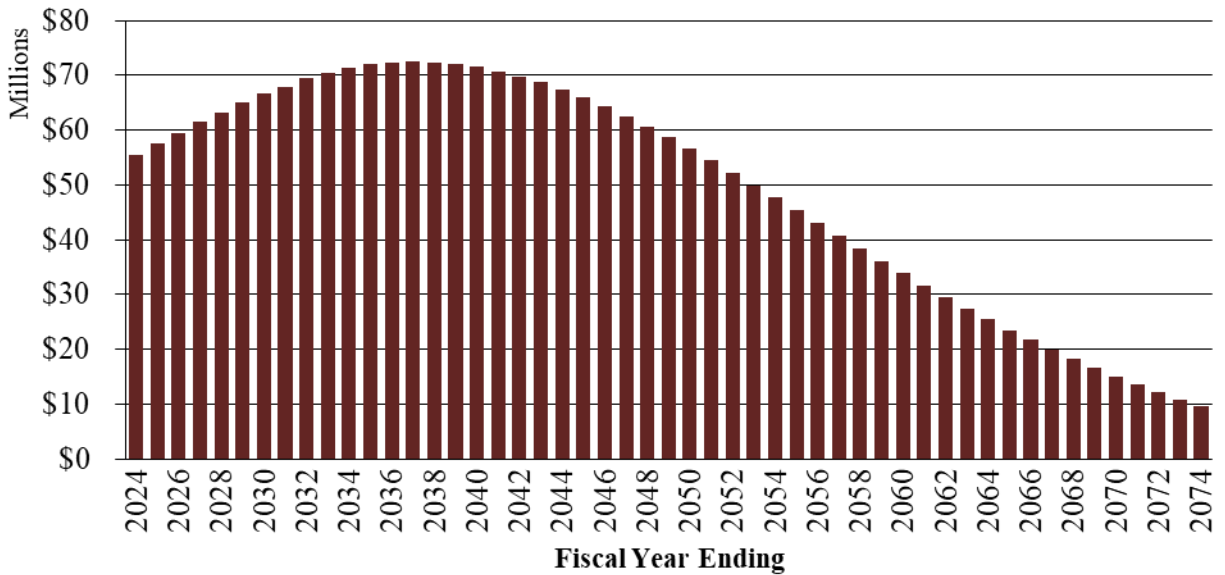
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needed to purchase annuities or immunize the portfolio, it is not clear how they could be used until all benefits have been paid.

If the Plan, on the other hand, were to run out of assets, TriMet would be forced to pay benefits directly on a pay-as-you-go basis. As long as TriMet can afford the pay-as-you-go costs, benefits would remain unchanged. However, if TriMet cannot afford the pay-as-you-go costs when the plan has run out of assets, benefits may be impaired. The chart below shows a projection of expected benefit payments for the closed plan. The peak level of benefit payments is not expected to be reached until 2036.

Projected Benefit Payments

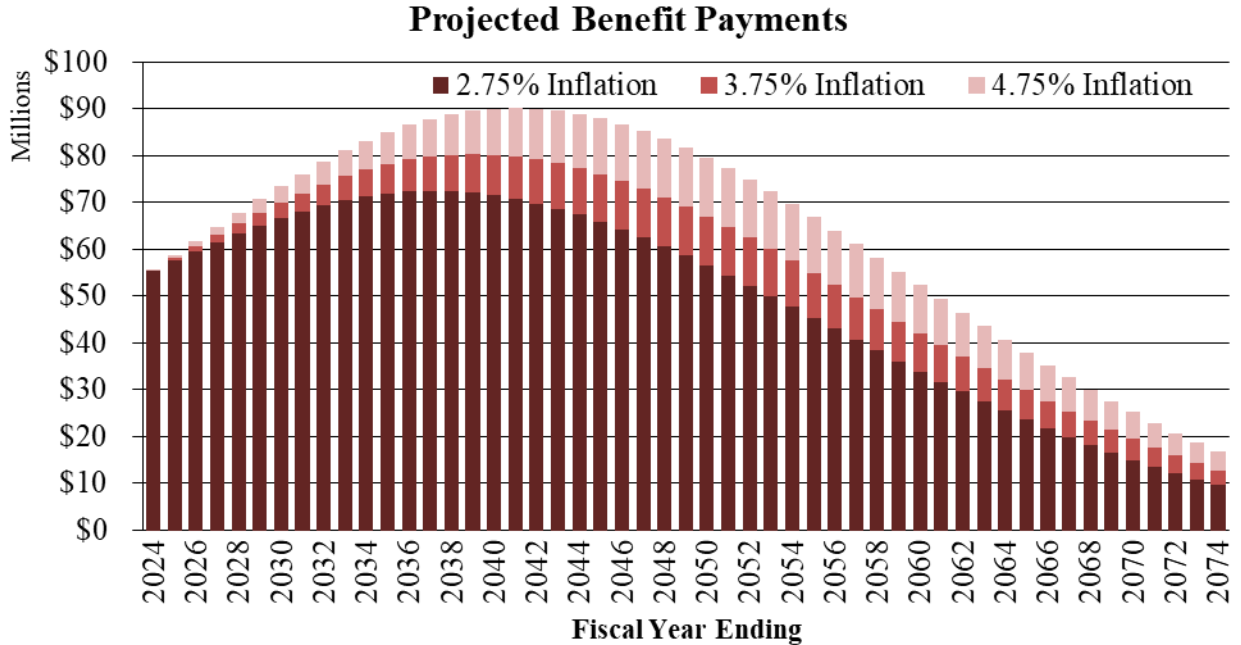


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Sensitivity to Inflation

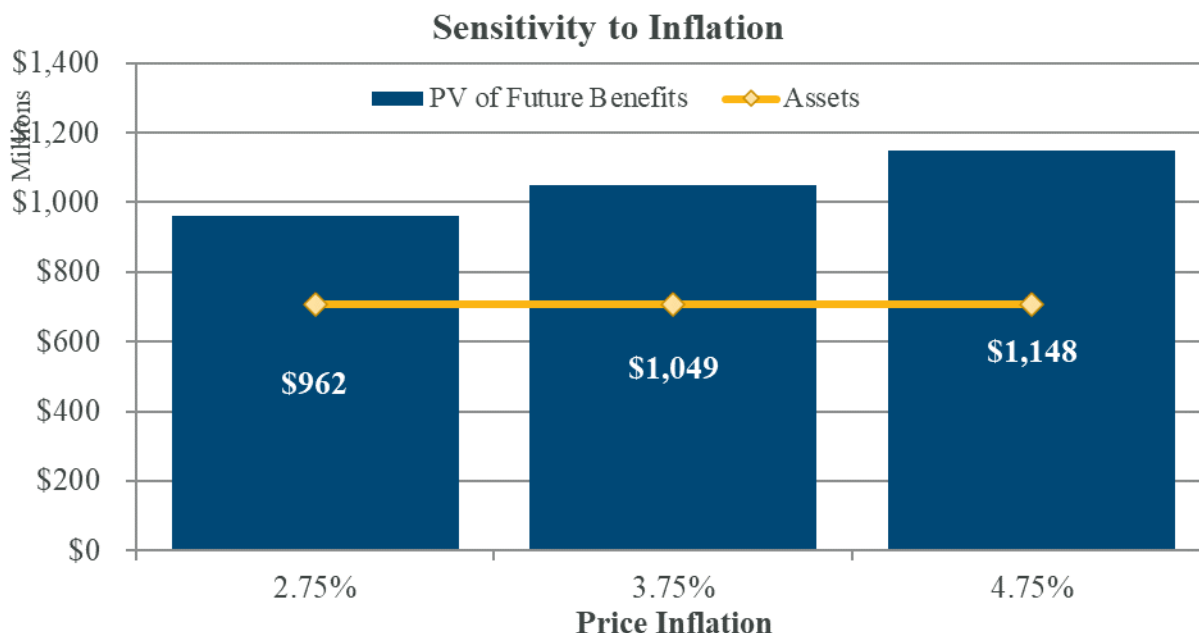
The chart below illustrates the sensitivity of projected benefit payments to inflation. The darkest bars show the projected benefit payments with the assumed inflation of 2.75%; the medium bars show the additional benefit payments if inflation is 3.75% each year; and, the lightest bars show the additional benefit payments if inflation is 4.75% each year.



Higher inflation could result in materially higher benefit payments that would require a greater amount of assets in the plan. The chart on the following page compares assets to the present value of all projected future benefit payments assuming inflation of 2.75%, 3.75%, and 4.75%. The present value of future benefits is shown as a dark blue bar. The Market Value of Assets is shown by the gold line.

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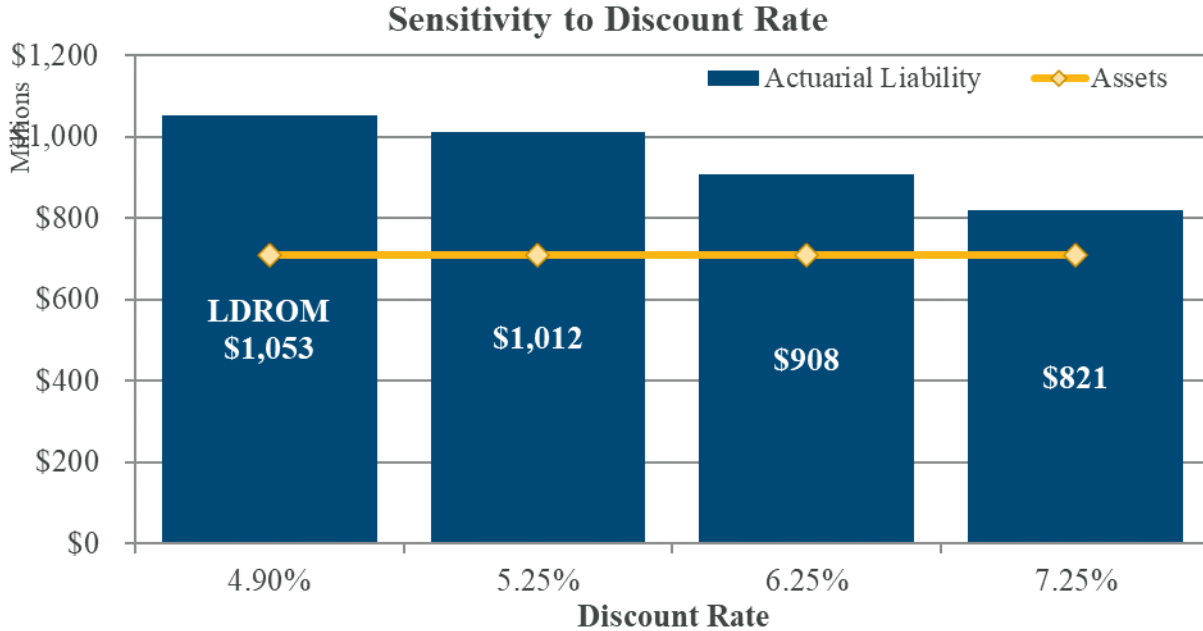
The COLA granted to retirees and beneficiaries receiving benefits is equal to either 100 percent or 90 percent of the rate of inflation depending on the date of retirement. If inflation is 2.75%, annual COLAs would be 2.75% (2.475% if 90 percent applies) and the Plan would need approximately \$962 million in assets today to pay all projected benefits compared to current assets of \$709 million. If inflation is 3.75%, annual COLAs would be 3.75% (3.375% if 90 percent applies) and the Plan would need approximately \$1,049 million in assets today. Finally, if inflation is 4.75%, annual COLAs would be 4.75% (4.275% if 90 percent applies) and the Plan would need \$1,148 million in assets to pay all projected benefits. These estimates assume that all other assumptions are met.

Sensitivity to Discount Rate

The chart on the next page compares the Market Value of Assets (gold line) to the Actuarial Liability (blue bar) using discount rates equal to the current expected rate of return and 100 basis points above and below the expected rate of return. In addition, the chart shows the low-default-risk obligation measure (LDRM), which is the Actuarial Liability using a discount rate derived from low-default-risk fixed-income securities that approximately match the benefit payments of the plan.

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The Plan invests in a diversified portfolio with the objective of maximizing investment returns at a reasonable level of risk. If investments return 6.25% annually, the Plan would need approximately \$908 million in assets today to pay all benefits attributable to past service compared to current assets of \$709 million. If investment returns are only 5.25%, the Plan would need approximately \$1,012 million in assets today, and if investment returns are 7.25%, the Plan would only need approximately \$821 million in assets today. The lowest risk portfolio for a pension plan with fixed cash flows would be composed entirely of low-default-risk fixed income securities whose cash flows match the benefit cash flows of the Plan. As of June 30, 2023, we estimate that such a portfolio would have an expected return of 4.90%, and the Plan would need \$1,053 million to pay all benefits attributed to past service. This amount is the LDROM. The \$145 million difference between the LDROM and the Actuarial Liability at 6.25% represents the expected savings from bearing the risk of investing in the Plan’s diversified portfolio. Alternatively, it also represents the cost of eliminating the investment risk.

Because the Plan invests in a diversified portfolio and not the LDROM portfolio, the reported funded status is higher, and expected employer contributions are lower. Benefit security for members of the Plan depends on a combination of the Plan’s assets, the investment returns generated on those assets, and the ability of TriMet to make any needed future contributions. An LDROM portfolio would generate more predictable but lower expected investment returns, potentially changing the level of reliance on future TriMet contributions to secure benefits.

The liability measures shown above, however, assume annual inflation of 2.75%. If annual inflation is higher; more assets would be needed to pay the benefits, and if inflation is lower; fewer assets would be needed to pay benefits. In this case, it is better to think of the sensitivity based on the investment return in excess of inflation. The assumption of 6.25% nominal investment returns and 2.75% inflation equates to a real investment return assumption of 3.50%.

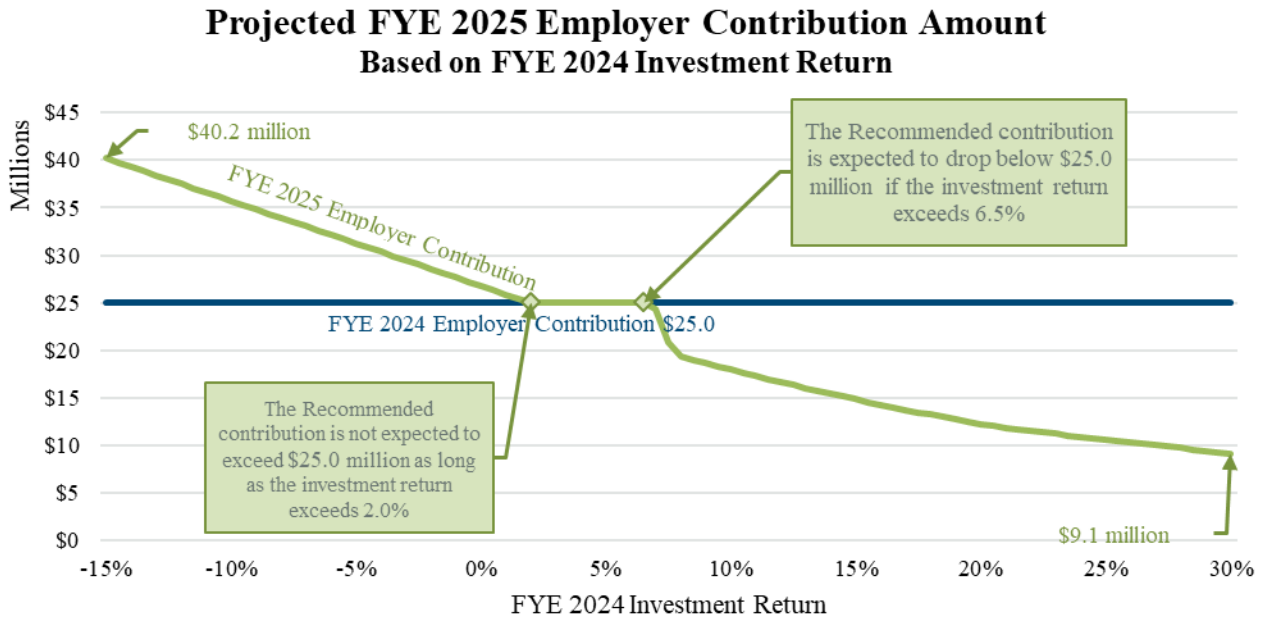
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Similarly, expected nominal investment returns of 5.25% and 7.25% equate to 2.50% and 4.50% real investment returns, respectively.

Sensitivity to Investment Returns

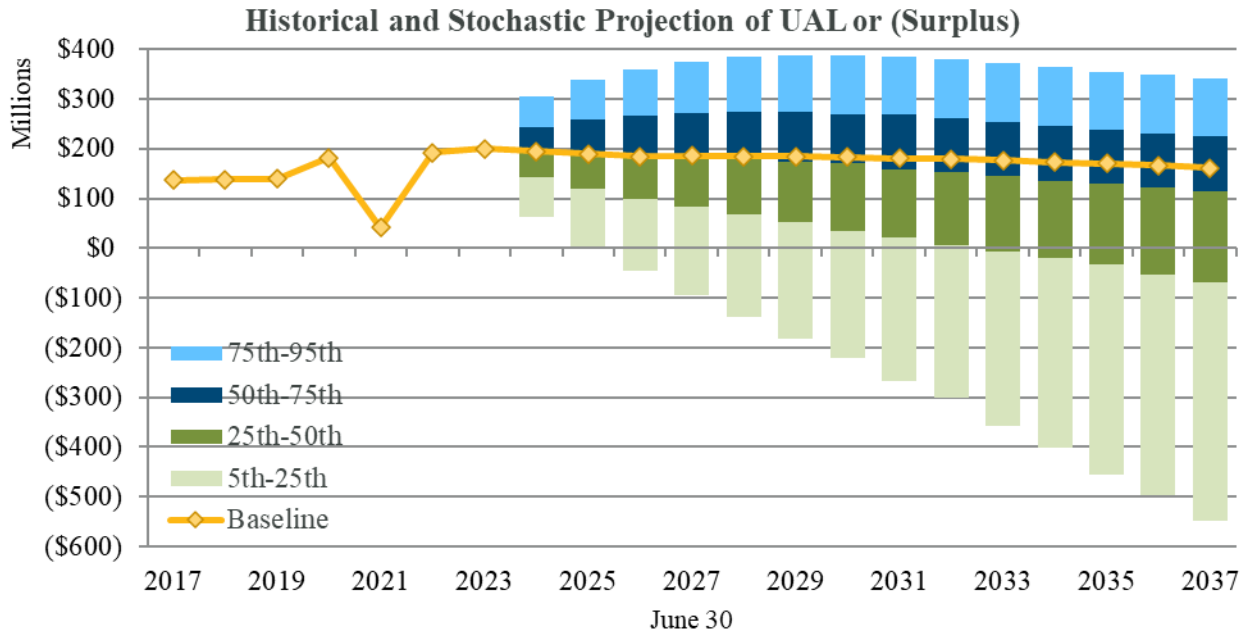
Contribution amounts are very sensitive to investment returns. The chart below shows the FYE 2025 contribution amount depending on the investment return earned during FYE 2024, assuming all other assumptions are met. The Recommended Contribution is expected to remain at \$25 million in FYE 2025 if investment returns are between approximately 2.0% and 6.5% and all other assumptions are met. However, it could range anywhere from \$9 to \$42 million depending on investment returns for FYE 2024.



The stochastic projections of contributions shown at the bottom of the dashboard (page 1) show a wide range in future Recommended Contributions depending on the range of future investment returns. The chart on the following page shows the projected range of the UAL or surplus on the same basis. Surplus amounts are shown as negative numbers.

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While the UAL is projected in the baseline to decline gradually, there is a wide range of potential outcomes. The new funding policy, however, has limited this range, reducing the potential surplus in 2036 from over \$800 million to about \$500 million while keeping the potential UAL in 2036 under \$350 million. Good investment returns can grow the surplus unrestrained because the minimum contribution is \$0. The range of projected outcomes, particularly for surplus, may be managed by changes in investment policy if a surplus develops.

More Detailed Assessment

While a more detailed assessment of risk is always valuable to enhance the understanding of the risks identified above, given the closed plan and regular asset-liability studies, the advantages of a more detailed assessment may not justify its costs at this time.

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SECTION III – CERTIFICATION

The purpose of this report is to present the June 30, 2023 Actuarial Valuation of the Pension Plan for Bargaining Unit Employees of TriMet (“Plan”). This report is for the use of the Plan and TriMet.

In preparing our report, we relied on information, some oral and some written, supplied by TriMet. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Most actuarial assumptions were adopted by the trustees at their May 6, 2020 meeting based on the results of an experience study and our recommendations. Please refer to the experience study report for the rationale for the assumptions. Based on our recommendations, mortality assumptions were updated by the trustees at their September 23, 2021 meeting, and the economic assumptions were updated by the trustees at their June 13, 2022 meeting. The new funding policy was adopted by the Trustees at a meeting on August 11, 2023. Please refer to the presentations of the analysis at those meetings for the rationale for the assumptions.

The liability measures and funding ratios in this report are for the purpose of establishing contribution rates. These measures are not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the Plan’s benefit obligations.

Future actuarial measurements may differ significantly from the current measurements 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; and, changes in plan provisions or applicable law.

Cheiron utilizes ProVal actuarial valuation software leased from Winklevoss Technologies (WinTech) to calculate liabilities and project benefit payments. We have relied on WinTech as the developer of ProVal. We have a basic understanding of ProVal and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in assumptions or output of ProVal that would affect this valuation.

Deterministic projections in this report were developed using P-scan, a proprietary tool used to illustrate the impact of changes in assumptions, methods, plan provisions, or actual experience (particularly investment experience) on the future financial status of the Plan. P-scan uses standard roll-forward techniques that implicitly assume a stable active population.

Stochastic projections in this report were developed using R-scan, our proprietary tool for assessing the probability of different outcomes based on the range of potential investment returns.

This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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SECTION III – CERTIFICATION

as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This report was prepared for the Plan and TriMet for the purposes described herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.



William R. Hallmark, ASA, EA, FCA, MAAA
Consulting Actuary



Steven M. Hastings, FSA, EA, FCA, MAAA
Consulting Actuary

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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SECTION IV – ASSETS

This section shows the changes in the Market Value of Assets and calculates the money-weighted investment return for GASB 67 and 68. In prior valuations, the Actuarial Value of Assets smoothed investment returns over a five-year period, but beginning with this valuation, the Actuarial Value of Assets is equal to the Market Value of Assets.

Statement of Change in Market Value of Assets

Table IV-1 shows the changes in the Market Value of Assets for the current and prior fiscal years.

Table IV-1

Change in Market Value of Assets				
	FYE 2023		FYE 2022	
Market Value, Beginning of Year	\$	675,579,582	\$	733,612,194
Contributions		42,004,938		15,304,442
Net Investment Earnings		45,827,360		(26,351,807)
Benefit Payments		(54,308,816)		(46,781,948)
Administrative Expenses		(280,532)		(203,299)
Market Value, End of Year	\$	708,822,532	\$	675,579,582

The contribution of \$9,263,220 made in November, 2022 is treated as a receivable contribution for FYE 2022

The Market Value of Assets increased from approximately \$676 million as of June 30, 2022 to \$709 million as of June 30, 2023. Actual contributions and investment earnings increased the market value by approximately \$42 million and \$46 million respectively while benefit payments and administrative expenses decreased the market value by approximately \$55 million.

The rate of return during the year is calculated on a money-weighted basis, which reflects the effect of external cash flows (contributions less benefit payments and administrative expenses) on a monthly basis. Table IV-2 shows the external cash flows by month, the number of months each cash flow was considered invested, and the external cash flows with interest at the money-weighted rate of return of 6.98% to the end of the year. The sum of the external cash flows with interest equals the Market Value of Assets at the end of the year.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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SECTION IV – ASSETS

Table IV-2

Money-Weighted Rate of Return Fiscal Year Ending June 30, 2023				
	Net External Cash Flows	Months Invested	Net External Cash Flows With Interest	
Beginning Value, June 30, 2022	\$ 675,579,582	12	\$	722,442,902
<u>Monthly Net External Cash Flows</u>				
July	(4,490,169)	11		(4,774,880)
August	(4,448,398)	10		(4,704,096)
September	(4,484,401)	9		(4,715,738)
October	(4,471,050)	8		(4,675,495)
November	(4,505,800)	7		(4,685,573)
December	(4,531,913)	6		(4,686,462)
January	(4,449,798)	5		(4,575,901)
February	24,547,993	4		25,102,963
March	(4,526,762)	3		(4,603,302)
April	(4,495,019)	2		(4,545,546)
May	(4,862,181)	1		(4,889,432)
June	8,133,090	0		8,133,090
Ending Value, June 30, 2023			\$	708,822,532
Money- Weighted Rate of Return	6.94%			

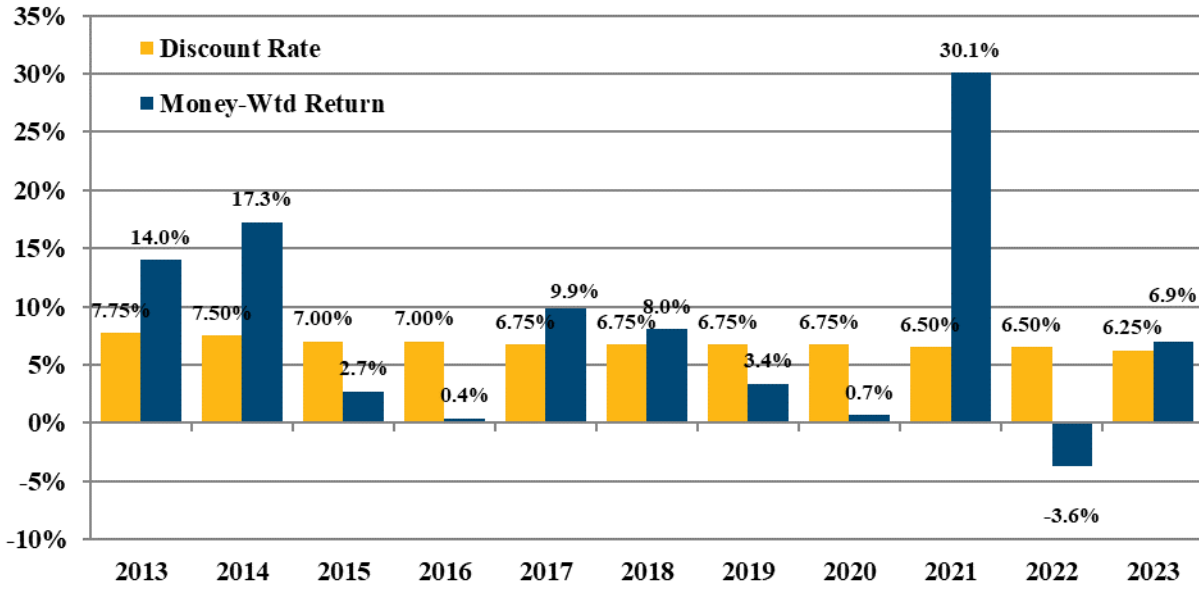
The money-weighted rate of return for the year ended June 30, 2023 was 6.94% compared to an expected return of 6.25%. As shown in the chart on the following page, over the last 10 years, the money-weighted rate of return² has varied significantly from 30.1% in 2021 to -3.6% in 2022.

² Money-weighted returns prior to FYE 2014 were not calculated based on actual monthly external cash flows, but estimated the timing of external cash flows throughout the year.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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SECTION IV – ASSETS

Historical Rates of Return



**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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SECTION V – MEASURES OF LIABILITY

This section presents detailed information on liability measures for the Plan for funding purposes, including:

- Present value of future benefits,
- Actuarial Liability, and
- Normal cost.

Present Value of Future Benefits: The present value of future benefits represents the expected amount of money needed today if all assumptions are met to pay for all benefits both earned as of the valuation date and expected to be earned in the future by current plan members under the current plan provisions. Table V-1 below shows the present value of future benefits as of June 30, 2023 and June 30, 2022.

Table V-1

Present Value of Future Benefits			
	June 30, 2023	June 30, 2022	% Change
Actives	\$ 303,645,736	\$ 296,781,046	2.3%
Deferred	19,998,028	28,536,943	-29.9%
In Pay Status	<u>638,630,175</u>	<u>598,379,860</u>	<u>6.7%</u>
Total	\$ 962,273,939	\$ 923,697,849	4.2%

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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SECTION V – MEASURES OF LIABILITY

Actuarial Liability

The Actuarial Liability represents the expected amount of money needed today if all assumptions are met to pay for benefits attributed to service prior to the valuation date under the Entry Age actuarial cost method. As such, it is the amount of assets targeted by the actuarial cost method for the Plan to hold as of the valuation date. It is not the amount necessary to settle the obligation. Under GASB 67 and 68, the Entry Age Actuarial Liability is referred to as the Total Pension Liability. Table V-2 below shows the Actuarial Liability as of June 30, 2023 and June 30, 2022.

Table V-2

Actuarial Liability			
	June 30, 2023	June 30, 2022	% Change
Actives			
Retirement	\$ 226,038,893	\$ 218,890,273	3.3%
Termination	2,938,897	3,674,793	-20.0%
Death	933,706	961,462	-2.9%
Disability	12,353,676	12,082,112	2.2%
Transfers to Management	<u>7,520,531</u>	<u>5,728,988</u>	<u>31.3%</u>
Total Actives	\$ 249,785,703	\$ 241,337,628	3.5%
Vested Terminated	\$ 19,998,028	\$ 28,536,943	-29.9%
In Pay Status			
Retirees and Beneficiaries	\$ 570,492,706	\$ 525,389,725	8.6%
Disabled	<u>68,137,469</u>	<u>72,990,135</u>	<u>-6.6%</u>
Total In Pay	\$ 638,630,175	\$ 598,379,860	6.7%
Total	\$ 908,413,906	\$ 868,254,431	4.6%

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

SECTION V – MEASURES OF LIABILITY

The Actuarial Liability is expected to increase each year due to interest and the accrual of an additional year of service for active members. It is expected to decrease each year due to benefits that have been paid. Differences between the actual experience and assumed experience also contribute to the change in Actuarial Liability. Table V-3 below provides a history of the experience gains and losses attributable to each of the primary demographic assumptions. Consistent patterns of gains or of losses provide an indication that an assumption may need to be updated.

Table V-3

History of Demographic (Gains) and Losses					
	Fiscal Year Ending				
	2019	2020	2021	2022	2023
Benefit Rates	\$ (6,351,189)	\$ (6,199,897)	\$ 6,526,272	\$ (1,098,661)	\$ 11,083,636
Retirement	(1,148,456)	2,173,599	(592,238)	1,499,574	(478,592)
Termination	(138,109)	(980,389)	35,606	23,704	728,977
Mortality	3,604,574	(135,833)	1,566,931	(2,428,408)	1,835,917
Disability	110,605	46,435	367,408	(64,789)	998,190
Retiree COLAs	1,469,242	(488,858)	(2,250,235)	15,930,316	23,284,790
Other	<u>0</u>	<u>210,485</u>	<u>(2,288,787)</u>	<u>(1,134,392)</u>	<u>(4,018,842)</u>
Total	\$ (2,453,333)	\$ (5,374,458)	\$ 3,364,957	\$ 12,727,344	\$ 33,434,076

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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SECTION V – MEASURES OF LIABILITY

Normal Cost

Under the Entry Age (EA) Actuarial Cost Method, the present value of future benefits for each individual is spread over the individual’s expected working career under the Plan as a level percentage of the individual’s expected pay. The normal cost rate is determined by taking the value, as of entry age into the Plan, of each member’s projected future benefits divided by the present value, also at entry age, of each member’s expected future salary. The normal cost rate is multiplied by current salary to determine each member’s normal cost. The normal cost of the Plan is the sum of the normal costs for each individual. The normal cost represents the expected amount of money needed to fund the benefits attributed to the next year of service under the Entry Age Actuarial Cost Method. Under GASB 67 and 68, the EA normal cost is referred to as the service cost. Table V-4 below shows the total normal cost as of June 30, 2023 and June 30, 2022.

Table V-4

Normal Cost			
	June 30, 2023	June 30, 2022	% Change
Retirement	\$ 5,910,837	\$ 6,080,289	-2.8%
Termination	778,292	779,555	-0.2%
Death	39,400	42,582	-7.5%
Disability	937,075	893,702	4.9%
Transfers to Management	<u>192,514</u>	<u>147,160</u>	<u>30.8%</u>
Total Normal Cost	\$ 7,858,118	\$ 7,943,288	-1.1%

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

SECTION VI – CONTRIBUTIONS

This section of the report develops minimum, maximum, and recommended contribution amounts in accordance with the Plan’s Funding Policy. Because the Plan has been closed to new entrants since August 1, 2012, and the Actuarial Liability is projected to begin declining as benefits are paid out, the Plan’s funding policy differs significantly from what would be used for an ongoing pension plan. The objective is to maintain a well-funded pension plan without developing a surplus that could not be used efficiently until all benefits have been paid. Consequently, the funding policy targets maintaining a funded ratio between 80% and 90% rather than the normal target of 100%.

Minimum Contribution

If the funded percentage is greater than or equal to 80%, the minimum contribution is equal to the sum of:

- Normal cost,
- Assumed administrative expenses, and
- A payment on the UAL equal to a 40-year amortization as a level percentage of payroll.

This amount is equal to the minimum required contribution in the plan document and the Working Wage Agreement.

However, since the funded percentage is less than 80%, the minimum contribution is equal to the sum of:

- Normal cost,
- Assumed administrative expenses,
- 10-year layered amortization payment to reach 80% funded, and
- The UAL payment amount needed to maintain the UAL or funded percentage at 80%.

Table VI-1 shows the schedule of 10-year layered amortization payments to get the Plan up to 80% funded.

Table VI-1

UAL Amortization to 80%			
Valuation Year	Outstanding Balance	Remaining Period	Payment Amount
2023	\$ 17,908,593	10	\$ 2,317,276
Total	\$ 17,908,593		\$ 2,317,276

Table VI-2 shows the development of the Minimum contribution as of the beginning of the year under the new funding policy.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

SECTION VI – CONTRIBUTIONS

Table VI-2

Development of Minimum Contribution	
	FYE 2024
1. Normal Cost	\$ 7,858,118
2. Administrative Expenses	343,920
3. Amortization Payment Toward 80% Funded	2,317,276
4. Remaining 20% of Actuarial Liability	181,682,781
5. Interest on (4)	10,687,222
6. Expected Benefit Payments (One Year)	55,474,065
7. 20% of Benefit Payments (Discounted to Beginning of Year)	10,763,550
8. UAL Payment to Maintain Funded Status at 80% [Maximum of (5) and (7)]	\$ 10,763,550
9. Minimum Contribution: (1) + (2) + (3) + (8)	\$ 21,282,864

Maximum Contribution

If the funded percentage is greater than or equal to 90%, the maximum contribution is equal to the sum of:

- Normal cost,
- Assumed administrative expenses, and
- A payment on the UAL equal to a 40-year amortization as a level percentage of payroll.

If the funded percentage is greater than or equal to 80% and less than 90%, the maximum contribution is equal to the sum of:

- Normal cost,
- Assumed administrative expenses, and
- The UAL payment amount needed to maintain funded status.

However, since the funded percentage is less than 80%, the maximum contribution is the amount needed to get the funded percentage to 80% in one year. Table VI-3 shows the calculation of the maximum contribution as of the beginning of the year.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

SECTION VI – CONTRIBUTIONS

Table VI-3

Development of Maximum Contribution Contribution Needed to Get to 80% Funded	
	FYE 2024
1. Actuarial Liability, June 30, 2023	\$ 908,413,906
2. Normal Cost	7,858,118
3. Administrative Expenses	343,920
4. Total, June 30, 2023	\$ 916,615,944
5. 80% of (4)	733,292,755
6. Market Value of Assets	708,822,532
7. 20% of Benefit Payments (Discounted to Beginning of Year)	10,763,550
8. Maximum Contribution: (5) - (6) + (7)	\$ 35,233,773

Recommended Contribution

If the funded percentage is greater than or equal to 90%, the Recommended contribution equals the Minimum contribution.

If the funded percentage is between 80% and 90%, the recommended contribution grades down from the maximum contribution if the plan is 80% funded to the minimum contribution if the plan is 90% funded.

However, since the funded percentage is less than 80%, the recommended contribution is the greater of the minimum contribution or TriMet’s budgeted amount for pension and OPEB trust contributions, but not more than the maximum contribution. We understand that TriMet’s current budgeted amount for pension and OPEB trust contributions is \$25.0 million. Table VI-4 shows the calculation of the Recommended contribution.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

SECTION VI – CONTRIBUTIONS

Table VI-4

Development of Recommended Contribution	
	FYE 2024
1. Minimum Contribution	\$ 21,282,864
2. Budget for Pension and OPEB Trust Contributions Discounted to Beginning of Year	24,318,603
3. Preliminary Recommended Contribution [Max of (1) and (2)]	\$ 24,318,603
4. Maximum Contribution	35,233,773
5. Recommended Contribution [Min of (3) and (4)]	\$ 24,318,603

Reasonable Actuarially Determined Contribution (Reasonable ADC)

The Plan’s funding policy will not always satisfy the requirements for a Reasonable ADC under the newly issued Actuarial Standards of Practice No. 4, particularly when the Plan is relatively well funded. For purposes of disclosing a Reasonable ADC, the Reasonable ADC will be defined as the greater of the minimum contribution described above or the sum of:

- Normal cost,
- Assumed administrative expenses, and
- A payment on the UAL equal to a 25-year amortization as a level percentage of payroll.

Note that the effective amortization period becomes shorter when the plan is less well funded due to the minimum contribution. This structure was selected to balance generational equity with the predictability and stability of contributions while also minimizing the likelihood of a surplus and ensuring assets are available to pay benefits when due.

Table VI-5 shows the calculation of the Reasonable ADC as of the beginning of the year.

Table VI-5

Development of Reasonable ADC	
	FYE 2024
1. Normal Cost	\$ 7,858,118
2. Administrative Expenses	343,920
3. UAL Payment Based on 25- Year Amortization	11,021,599
4. Total: (1) + (2) + (3)	\$ 19,223,637
5. Minimum Contribution	21,282,864
6. Reasonable ADC [Max of (4) and (5)]	\$ 21,282,864

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

SECTION VI – CONTRIBUTIONS

Table VI-6 shows each contribution amount for FYE 2024 and 2023 as if the new funding policy applied for FYE 2023. The amounts are shown assuming contributions are made at the beginning of the fiscal year or at the beginning of each month.

Table VI-6

Actuarially Determined Contribution Amounts			
	FYE 2024	FYE 2023	% Change
Funded Percentage	78.0%	77.8%	0.2%
Minimum Contribution			
Beginning of Year	\$ 21,282,864	\$ 21,685,605	-1.9%
Equivalent Monthly Contribution	1,823,267	1,857,769	-1.9%
Annual Amount	\$ 21,879,204	\$ 22,293,228	-1.9%
Maximum Contribution			
Beginning of Year	\$ 35,233,773	\$ 35,511,603	-0.8%
Equivalent Monthly Contribution	3,018,417	3,042,219	-0.8%
Annual Amount	\$ 36,221,004	\$ 36,506,628	-0.8%
Recommended Contribution			
Beginning of Year	\$ 24,318,603	\$ 24,318,603	0.0%
Equivalent Monthly Contribution	2,083,333	2,083,333	0.0%
Annual Amount	\$ 24,999,996	\$ 24,999,996	0.0%
Reasonable ADC			
Beginning of Year	\$ 21,282,864	\$ 21,685,605	-1.9%
Equivalent Monthly Contribution	1,823,267	1,857,769	-1.9%
Annual Amount	\$ 21,879,204	\$ 22,293,228	-1.9%

Annual Amount equals Equivalent Monthly Contribution x 12

FYE 2023 Amounts Reflect New Funding Policy and Are For Illustrative Purposes Only

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

SECTION VII – GASB 67 AND 68 DISCLOSURES

This section of the report provides accounting and financial reporting information under Governmental Accounting Standards Board Statements 67 and 68 for the Plan and TriMet. This information includes:

- Determination of Discount Rate,
- Changes in the Net Pension Liability,
- Calculation of the Net Pension Liability at the discount rate as well as discount rates 1% higher and lower than the discount rate,
- Schedule of Employer Contributions,
- Disclosure of Deferred Inflows and Outflows, and
- Calculation of the Annual Pension Expense for TriMet.

Determination of Discount Rate

The discount rate used to measure the Total Pension Liability was 6.25%.

We have assumed that contributions to the Plan will follow the Recommended Contribution in the Plan's Funding Policy.

We performed a formal cash flow projection as described under Paragraph 41 of GASB Statement 67 which can be found in Appendix D. All benefit payments in the projection are paid from the Fiduciary Net Position. Therefore, the long-term expected rate of return on Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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SECTION VII – GASB 67 AND 68 DISCLOSURES

Note Disclosures

Table VII-1 below shows the changes in the Total Pension Liability, the Plan Fiduciary Net Position (i.e., fair value of Plan assets), and the Net Pension Liability during the Measurement Year.

Table VII-1

Change in Net Pension Liability			
	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a) - (b)
Balances at 6/30/2022	\$ 868,254,431	\$ 666,316,362	\$ 201,938,069
Changes for the year:			
Service cost	7,943,288		7,943,288
Interest	53,090,927		53,090,927
Changes of benefits	0		0
Differences between expected and actual experience	33,434,076		33,434,076
Changes of assumptions	0		0
Contributions - employer		51,268,158	(51,268,158)
Contributions - member		0	0
Net investment income		45,827,360	(45,827,360)
Benefit payments	(54,308,816)	(54,308,816)	0
Administrative expense		(280,532)	280,532
Net changes	<u>\$ 40,159,475</u>	<u>\$ 42,506,170</u>	<u>\$ (2,346,695)</u>
Balances at 6/30/2023	<u>\$ 908,413,906</u>	<u>\$ 708,822,532</u>	<u>\$ 199,591,374</u>

During the measurement year, the NPL decreased by approximately \$2.3 million. The service cost and interest cost increased the NPL by approximately \$61.0 million. Investment returns and contributions offset by administrative expenses decreased the NPL by approximately \$96.7 million. However, losses due to liability experience increased the NPL by approximately \$33.4 million.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

SECTION VII – GASB 67 AND 68 DISCLOSURES

Changes in the discount rate affect the measurement of the TPL. Lower discount rates produce a higher TPL and higher discount rates produce a lower TPL. Because the discount rate does not affect the measurement of assets, the percentage change in the NPL can be very significant for a relatively small change in the discount rate. The table below shows the sensitivity of the NPL to the discount rate.

Table VII-2

Sensitivity of Net Pension Liability to Changes in Discount Rate			
	1% Decrease 5.25%	Discount Rate 6.25%	1% Increase 7.25%
Total Pension Liability	\$ 1,012,176,315	\$ 908,413,906	\$ 820,997,314
Plan Fiduciary Net Position	<u>708,822,532</u>	<u>708,822,532</u>	<u>708,822,532</u>
Net Pension Liability	<u>\$ 303,353,783</u>	<u>\$ 199,591,374</u>	<u>\$ 112,174,782</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	70.0%	78.0%	86.3%

A one percent decrease in the discount rate increases the TPL by approximately 11% and increases the NPL by approximately 52%. A one percent increase in the discount rate decreases the TPL by approximately 10% and decreases the NPL by approximately 44%.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

SECTION VII – GASB 67 AND 68 DISCLOSURES

Required Supplementary Information

The schedules on the following pages show the changes in NPL and related ratios required by GASB for the last 10 years.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

SECTION VII – GASB 67 AND 68 DISCLOSURES

Table VII-3a

Schedule of Changes in Net Pension Liability and Related Ratios					
	FYE 2023	FYE 2022	FYE 2021	FYE 2020	FYE 2019
<u>Total Pension Liability (TPL)</u>					
Service cost (MOY)	\$ 7,943,288	\$ 7,795,441	\$ 8,150,506	\$ 8,675,232	\$ 9,642,740
Interest	53,090,927	49,410,345	48,271,615	47,371,742	46,537,334
Changes of benefit terms	0	900,168	0	0	0
Differences between expected and actual experience	33,434,076	12,727,343	3,364,957	(5,374,458)	(2,453,333)
Changes of assumptions	0	68,816,625	3,945,186	34,128,985	0
Benefit payments, including refunds	<u>(54,308,816)</u>	<u>(46,781,948)</u>	<u>(44,963,247)</u>	<u>(41,940,023)</u>	<u>(38,904,785)</u>
Net change in TPL	\$ 40,159,475	\$ 92,867,974	\$ 18,769,017	\$ 42,861,478	\$ 14,821,956
TPL - beginning	<u>868,254,431</u>	<u>775,386,457</u>	<u>756,617,440</u>	<u>713,755,962</u>	<u>698,934,006</u>
TPL - ending	<u>\$908,413,906</u>	<u>\$868,254,431</u>	<u>\$775,386,457</u>	<u>\$756,617,440</u>	<u>\$713,755,962</u>
<u>Plan fiduciary net position</u>					
Contributions - employer	\$ 51,268,158	\$ 6,041,222	\$ 33,929,446	\$ 37,755,077	\$ 34,717,720
Contributions - member	0	0	0	0	0
Net investment income	45,827,360	(26,351,807)	170,879,705	3,683,365	18,620,471
Benefit payments, including refunds	(54,308,816)	(46,781,948)	(44,963,247)	(41,940,023)	(38,904,785)
Administrative expense	<u>(280,532)</u>	<u>(203,299)</u>	<u>(289,090)</u>	<u>(362,932)</u>	<u>(395,612)</u>
Net change in plan fiduciary net position	\$ 42,506,170	\$ (67,295,832)	\$159,556,814	\$ (864,513)	\$ 14,037,794
Plan fiduciary net position - beginning	<u>666,316,362</u>	<u>733,612,194</u>	<u>574,055,380</u>	<u>574,919,893</u>	<u>560,882,099</u>
Plan fiduciary net position - ending	<u>\$708,822,532</u>	<u>\$666,316,362</u>	<u>\$733,612,194</u>	<u>\$574,055,380</u>	<u>\$574,919,893</u>
Net pension liability - ending	<u>\$199,591,374</u>	<u>\$201,938,069</u>	<u>\$ 41,774,263</u>	<u>\$182,562,060</u>	<u>\$138,836,069</u>
Plan fiduciary net position as a percentage of the TPL	78.0%	76.7%	94.6%	75.9%	80.5%
Covered payroll	\$ 74,468,029	\$ 78,431,367	\$ 83,541,536	\$ 90,088,824	\$ 97,405,506
Net pension liability as a percentage of covered payroll	268.0%	257.5%	50.0%	202.6%	142.5%

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

SECTION VII – GASB 67 AND 68 DISCLOSURES

Table VII-3b

Schedule of Changes in Net Pension Liability and Related Ratios					
	FYE 2018	FYE 2017	FYE 2016	FYE 2015	FYE 2014
<u>Total Pension Liability (TPL)</u>					
Service cost (MOY)	\$ 9,875,234	\$ 10,850,730	\$ 10,702,574	\$ 11,756,232	\$ 11,406,016
Interest	43,832,738	43,888,922	43,371,673	43,025,200	42,869,939
Changes of benefit terms	3,286,046	0	0	0	0
Differences between expected and actual experience	20,935,664	(19,614,961)	(8,966,475)	(541,183)	(11,294,241)
Changes of assumptions	0	0	18,776,392	(16,558,463)	29,476,059
Benefit payments, including refunds	(36,394,436)	(34,162,919)	(32,679,854)	(30,677,192)	(28,845,723)
Net change in TPL	\$ 41,535,246	\$ 961,772	\$ 31,204,310	\$ 7,004,594	\$ 43,612,050
TPL - beginning	<u>657,398,760</u>	<u>656,436,988</u>	<u>625,232,678</u>	<u>618,228,084</u>	<u>574,616,034</u>
TPL - ending	<u>\$698,934,006</u>	<u>\$657,398,760</u>	<u>\$656,436,988</u>	<u>\$625,232,678</u>	<u>\$618,228,084</u>
<u>Plan fiduciary net position</u>					
Contributions - employer	\$ 35,227,507	\$ 35,862,442	\$ 38,026,735	\$ 36,200,926	\$ 47,261,301
Contributions - member	0	0	0	0	0
Net investment income	41,479,101	46,645,429	1,948,822	12,275,500	64,460,966
Benefit payments, including refunds	(36,394,436)	(34,162,919)	(32,679,854)	(30,677,192)	(28,845,723)
Administrative expense	(356,886)	(247,254)	(281,539)	(363,267)	(486,934)
Net change in plan fiduciary net position	\$ 39,955,286	\$ 48,097,698	\$ 7,014,164	\$ 17,435,967	\$ 82,389,610
Plan fiduciary net position - beginning	<u>520,926,813</u>	<u>472,829,115</u>	<u>465,814,951</u>	<u>448,378,984</u>	<u>365,989,374</u>
Plan fiduciary net position - ending	<u>\$560,882,099</u>	<u>\$520,926,813</u>	<u>\$472,829,115</u>	<u>\$465,814,951</u>	<u>\$448,378,984</u>
Net pension liability - ending	<u>\$138,051,907</u>	<u>\$136,471,947</u>	<u>\$183,607,873</u>	<u>\$159,417,727</u>	<u>\$169,849,100</u>
Plan fiduciary net position as a percentage of the TPL	80.2%	79.2%	72.0%	74.5%	72.5%
Covered payroll	\$ 109,924,285	\$ 106,596,389	\$ 117,666,306	\$ 116,555,801	\$ 124,695,531
Net pension liability as a percentage of covered payroll	125.6%	128.0%	156.0%	136.8%	136.2%

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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SECTION VII – GASB 67 AND 68 DISCLOSURES

The schedule below shows a comparison of the Actuarially Determined Contribution (ADC) to actual contributions.

Table VII-4

Schedule of Employer Contributions					
	FYE 2023	FYE 2022	FYE 2021	FYE 2020	FYE 2019
Actuarially Determined Contribution	\$ 40,658,448	\$ 26,460,096	\$ 28,789,812	\$ 25,173,360	\$ 26,040,372
Contributions in Relation to the Actuarially Determined Contribution	<u>51,268,158</u>	<u>6,041,222</u>	<u>33,929,446</u>	<u>37,755,077</u>	<u>34,717,720</u>
Contribution Deficiency/(Excess)	<u>\$ (10,609,710)</u>	<u>\$ 20,418,874</u>	<u>\$ (5,139,634)</u>	<u>\$ (12,581,717)</u>	<u>\$ (8,677,348)</u>
Covered Payroll	\$ 74,468,029	\$ 78,431,367	\$ 83,541,536	\$ 90,088,824	\$ 97,405,506
Contributions as a Percentage of Covered Payroll	68.85%	7.70%	40.61%	41.91%	35.64%
	FYE 2018	FYE 2017	FYE 2016	FYE 2015	FYE 2014
Actuarially Determined Contribution	\$ 24,565,994	\$ 28,497,521	\$ 28,030,416	\$ 31,926,000	\$ 35,553,000
Contributions in Relation to the Actuarially Determined Contribution	<u>35,227,507</u>	<u>35,862,442</u>	<u>38,026,735</u>	<u>36,200,926</u>	<u>47,261,301</u>
Contribution Deficiency/(Excess)	<u>\$ (10,661,513)</u>	<u>\$ (7,364,921)</u>	<u>\$ (9,996,319)</u>	<u>\$ (4,274,926)</u>	<u>\$ (11,708,301)</u>
Covered Payroll	\$ 109,924,285	\$ 106,596,389	\$ 117,666,306	\$ 116,555,801	\$ 124,695,531
Contributions as a Percentage of Covered Payroll	32.05%	33.64%	32.32%	31.06%	37.90%

Key methods and assumptions used to determine the ADC under TriMet’s funding policy for FYE 2023. A complete description can be found in the 2022 actuarial valuation report.

Actuarial Cost Method	Individual Entry Age as a level percent of pay
Asset Valuation Method	Investment gains and losses are smoothed over 5 years with the resulting actuarial value restricted to be between 80% and 120% of the market value
Amortization Method	Closed 15-year period until 5 years remains, then open. Payments are scheduled to increase 2.5% each year.
Discount Rate	6.25%
Benefit Rate Increases	3.25%
Inflation	2.75%
Healthy Mortality	2016 Cheiron ATU mortality tables with generational mortality projection using MP-2020

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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SECTION VII – GASB 67 AND 68 DISCLOSURES

Employer Accounting

The schedules in this section are to be used by TriMet for its employer accounting for FYE 2023. These schedules develop the annual pension expense, including the amounts of deferred inflows and outflows. Experience gains and losses and assumption changes are recognized over the average future working life of active and inactive members, which is 2.2 years. Investment gains and losses are recognized over five years.

The table below summarizes the current balances of deferred outflows and deferred inflows of resources along with the net recognition over the next five years.

Table VII-5

Schedule of Deferred Inflows and Outflows of Resources		
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 20,782,238	\$ 0
Changes in assumptions	13,763,325	0
Net difference between projected and actual earnings on pension plan investments	0	6,368,497
Total	<u>\$ 34,545,563</u>	<u>\$ 6,368,497</u>
Amounts reported as deferred outflows and deferred inflows of resources will be recognized in pension expense as follows:		
Measurement year ended June 30:		
2024	\$ 25,403,400	
2025	(10,057,787)	
2026	13,688,415	
2027	(856,962)	
2028	0	
Thereafter	\$ 0	

The tables on the following pages provide details on the current balances of deferred inflows and outflows of resources along with the recognition of each base for each of the current and following five years, as well as the total for any years thereafter.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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SECTION VII – GASB 67 AND 68 DISCLOSURES

Table VII-6

Recognition of Experience (Gains) and Losses										
Experience Year	Recognition Period	Total Amount	Beginning	Ending	Recognition Year					
			Remaining Amount	Remaining Amount	2023	2024	2025	2026	2027	There after
2023	2.2	\$ 33,434,076	\$ 33,434,076	\$ 18,236,769	\$ 15,197,307	\$ 15,197,307	\$ 3,039,462	\$ 0	\$ 0	\$ 0
2022	2.5	12,727,343	7,636,406	2,545,469	5,090,937	2,545,469	0	0	0	0
2021	2.7	3,364,957	872,397	0	872,397	0	0	0	0	0
Deferred Outflows			41,942,879	20,782,238	21,160,641	17,742,776	3,039,462	0	0	0
Deferred (Inflows)			0	0	0	0	0	0	0	0
Net Change in Pension Expense			\$ 41,942,879	\$ 20,782,238	\$ 21,160,641	\$ 17,742,776	\$ 3,039,462	\$ 0	\$ 0	\$ 0

Table VII-7

Recognition of Assumption Changes										
Change Year	Recognition Period	Total Amount	Beginning	Ending	Recognition Year					
			Remaining Amount	Remaining Amount	2023	2024	2025	2026	2027	There after
2022	2.5	\$ 68,816,625	\$ 41,289,975	\$ 13,763,325	\$ 27,526,650	\$ 13,763,325	\$ 0	\$ 0	\$ 0	\$ 0
2021	2.7	3,945,186	1,022,826	0	1,022,826	0	0	0	0	0
Deferred Outflows			42,312,801	13,763,325	28,549,476	13,763,325	0	0	0	0
Deferred (Inflows)			0	0	0	0	0	0	0	0
Net Change in Pension Expense			\$ 42,312,801	\$ 13,763,325	\$ 28,549,476	\$ 13,763,325	\$ 0	\$ 0	\$ 0	\$ 0

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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SECTION VII – GASB 67 AND 68 DISCLOSURES

Table VII-8

Recognition of Investment (Gains) and Losses										
Experience Year	Recognition Period	Total Amount	Beginning	Ending	Recognition Year					
			Remaining Amount	Remaining Amount	2023	2024	2025	2026	2027	There after
2023	5.0	\$ (4,284,802)	\$ (4,284,802)	\$ (3,427,842)	\$ (856,960)	\$ (856,960)	\$ (856,960)	\$ (856,960)	\$ (856,962)	\$ 0
2022	5.0	72,726,867	58,181,494	43,636,121	14,545,373	14,545,373	14,545,373	14,545,375	0	0
2021	5.0	(133,928,306)	(80,356,984)	(53,571,323)	(26,785,661)	(26,785,661)	(26,785,662)	0	0	0
2020	5.0	34,972,743	13,989,096	6,994,547	6,994,549	6,994,547	0	0	0	0
2019	5.0	19,086,931	3,817,387	0	3,817,387	0	0	0	0	0
Net Change in Pension Expense			\$ (8,653,809)	\$ (6,368,497)	\$ (2,285,312)	\$ (6,102,701)	\$(13,097,249)	\$ 13,688,415	\$ (856,962)	\$ 0

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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SECTION VII – GASB 67 AND 68 DISCLOSURES

The annual pension expense recognized by TriMet can be calculated two different ways. First, it is the change in the amounts reported on TriMet’s Statement of Net Position that relate to the Plan and are not attributable to employer contributions. That is, it is the change in NPL plus the changes in deferred outflows and inflows plus employer contributions.

Alternatively, annual pension expense can be calculated by its individual components. While GASB does not require or suggest the organization of the individual components shown in the table below, we believe it helps to understand the level and volatility of pension expense.

Table VII-9

Calculation of Pension Expense			
	Measurement Year Ending		
	2024	2023	2022
Change in Net Pension Liability	\$ (4,580,284)	\$ (2,346,695)	\$ 160,163,806
Change in Deferred Outflows	31,506,101	16,276,041	(37,370,666)
Change in Deferred Inflows	(6,102,701)	1,999,490	(76,975,356)
Employer Contributions	<u>25,000,000</u>	<u>51,268,158</u>	<u>6,041,222</u>
Pension Expense	\$ 45,823,116	\$ 67,196,994	\$ 51,859,006
Operating Expenses			
Service cost	\$ 7,858,118	\$ 7,943,288	\$ 7,795,441
Employee contributions	0	0	0
Administrative expenses	<u>354,505</u>	<u>280,532</u>	<u>203,299</u>
Total	\$ 8,212,623	\$ 8,223,820	\$ 7,998,740
Financing Expenses			
Interest cost	\$ 55,559,709	\$ 53,090,927	\$ 49,410,345
Expected return on assets	<u>(43,352,616)</u>	<u>(41,542,558)</u>	<u>(46,375,060)</u>
Total	\$ 12,207,093	\$ 11,548,369	\$ 3,035,285
Changes			
Benefit changes	\$ 0	\$ 0	\$ 900,168
Recognition of assumption changes	13,763,325	28,549,476	37,836,085
Recognition of liability gains and losses	17,742,776	21,160,641	4,790,507
Recognition of investment gains and losses	<u>(6,102,701)</u>	<u>(2,285,312)</u>	<u>(2,701,779)</u>
Total	\$ 25,403,400	\$ 47,424,805	\$ 40,824,981
Pension Expense	\$ 45,823,116	\$ 67,196,994	\$ 51,859,006

Figures for the 2024 measurement year are projected

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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SECTION VII – GASB 67 AND 68 DISCLOSURES

Operating expenses are items directly attributable to the operation of the plan during the measurement year. Service cost less employee contributions represents the increase in employer-provided benefits attributable to the year, and administrative expenses are the cost of operating the plan for the year.

Financing expenses equal the interest on the Total Pension Liability less the expected return on assets. Since the discount rate is equal to the long-term expected return on assets, the financing expense is primarily the interest on the Net Pension Liability with an adjustment for the difference between the interest on the service cost and contributions.

The recognition of changes drives most of the volatility in pension expense from year to year. Changes include any changes in benefits made during the year and the recognized amounts due to assumption changes, gains or losses on the TPL, and investment gains or losses.

The total pension expense increased from the prior year by about \$15.3 million. While operating expenses remained relatively level, financing expenses increased \$8.5 million and the recognition of changes increased \$6.6 million due to an increase in the recognition of liability experience and a decrease in the recognition of assumption changes.

The projected expense for FYE 2024 reflects decreases in the recognition of assumption changes, liability experience, and investment losses. Actual experience during FYE 2024 may have a significant impact on this projection.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX A – MEMBERSHIP INFORMATION

Data Assumptions and Methods

In preparing our data, we relied on information supplied by TriMet. This information includes, but is not limited to, plan provisions, employee data, and financial information. Our methodology for obtaining the data used for the valuation is based upon the following assumptions and practices:

- All active employees are assumed to accrue a full year of service in all future years.
- The most recent annual salary for actives is calculated to be “Hourly Rate” multiplied by 2,080 for members identified as Full-Time Operators.
- The most recent annual salary for actives is calculated to be “Hourly Rate” multiplied by 1,560 for members identified as Mini-Run Operators.

Table A-1

Active Member Data			
	June 30, 2023	June 30, 2022	% Change
Active Union Members			
Count	727	834	-12.8%
Average Current Age	54.3	53.9	0.7%
Average Eligibility Service	20.0	19.1	4.7%
Average Benefit Service	19.3	18.5	4.3%
Transfers to Management			
Count	55	49	12.2%
Average Age	52.0	52.6	-1.2%

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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APPENDIX A – MEMBERSHIP INFORMATION

Table A-2

In Pay Status Member Data			
	June 30, 2023	June 30, 2022	% Change
Retirees			
Count	1,716	1,681	2.1%
Average Age	71.7	71.4	0.4%
Total Annualized Benefits	\$ 43,908,765	\$ 40,066,500	9.6%
Average Annual Benefit	\$ 25,588	\$ 23,835	7.4%
Beneficiaries & Alternate Payees			
Count	342	325	5.2%
Average Age	73.4	72.5	1.2%
Total Annualized Benefits	\$ 5,148,866	\$ 4,567,514	12.7%
Average Annual Benefit	\$ 15,055	\$ 14,054	7.1%
Disabled			
Count	182	181	0.6%
Average Age	65.7	65.2	0.8%
Total Annualized Benefits	\$ 5,327,597	\$ 4,966,978	7.3%
Average Annual Benefit	\$ 29,273	\$ 27,442	6.7%
Total			
Count	2,240	2,187	2.4%
Average Age	71.5	71.1	0.6%
Total Annualized Benefits	\$ 54,385,227	\$ 49,600,992	9.6%
Average Annual Benefit	\$ 24,279	\$ 22,680	7.1%

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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APPENDIX A – MEMBERSHIP INFORMATION

Table A-3

Deferred Member Data			
	Count		
	June 30, 2023	June 30, 2022	% Change
Vested Terminated Members			
Count	123	118	4.2%
Average Age	51.1	51.8	-1.3%
Total Annualized Benefits	\$ 1,718,992	\$ 1,645,247	4.5%
Average Annual Benefit	\$ 13,976	\$ 13,943	0.2%
Deferred Beneficiaries			
Count	14	15	-6.7%
Average Age	57.7	56.1	2.8%

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX A – MEMBERSHIP INFORMATION

Table A-4

Change in Plan Membership										
	Active	Terminated Vested	Transfer to Mgmt	Deferred Beneficiary	Retiree	Beneficiary	Disabled	Alternate Payee	Deferred Alternate Payee	Totals
June 30, 2022	834	118	49	15	1,681	267	181	58	0	3,203
New Entrants	0	0	0	0	0	0	0	0	0	0
Rehires/Returned to Work	0	0	0	0	0	0	0	0	0	0
Vested Terminations	(18)	18	0	0	0	0	0	0	0	0
Nonvested Terminations	0	0	0	0	0	0	0	0	0	0
Disabilities	(4)	0	0	0	0	0	4	0	0	0
Retirements	(74)	(13)	(3)	0	90	0	0	0	0	0
Deaths	(1)	0	(1)	0	(55)	0	(3)	0	0	(60)
New Beneficiaries	0	0	0	0	0	17	0	6	0	23
Beneficiary Deaths	0	0	0	0	0	(4)	0	(2)	0	(6)
Benefit Ceased	0	0	0	0	0	0	0	0	0	0
Transfers to Mgmt*	(10)	0	10	0	0	0	0	0	0	0
Transfers from Mgmt*	0	0	0	0	0	0	0	0	0	0
Miscellaneous Adjustments	0	0	0	(1)	0	0	0	0	0	(1)
June 30, 2023	727	123	55	14	1,716	280	182	62	0	3,159

*Includes transfers who are not eligible for Management DB Plan.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX A – MEMBERSHIP INFORMATION

Table A-5

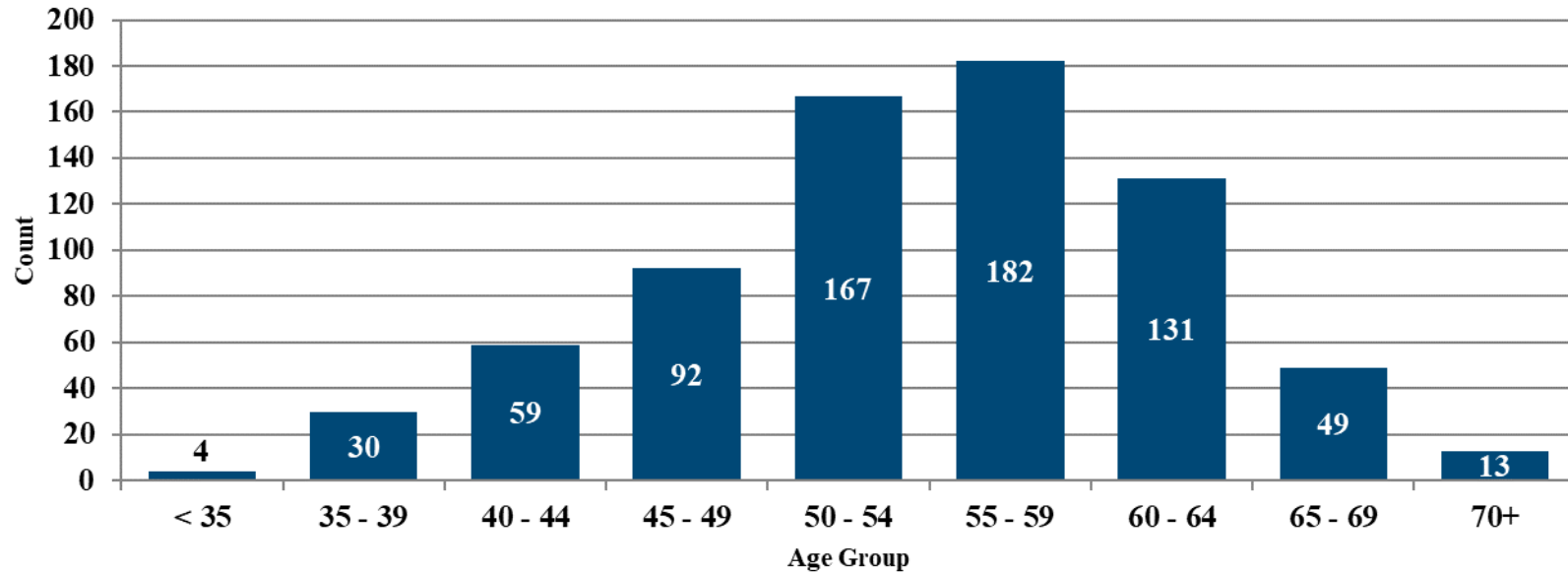
Distribution of Active Union Members as of June 30, 2023										
Age	Years of Service									Total
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	
Under 35	0	0	4	0	0	0	0	0	0	4
35 to 39	0	0	23	7	0	0	0	0	0	30
40 to 44	0	2	31	24	2	0	0	0	0	59
45 to 49	0	3	30	33	18	8	0	0	0	92
50 to 54	0	1	42	47	40	35	2	0	0	167
55 to 59	0	1	33	53	45	32	15	2	1	182
60 to 64	0	3	29	29	20	34	10	4	2	131
65 to 69	0	2	15	10	6	8	4	3	1	49
70 and up	0	1	1	3	1	2	1	2	2	13
Total Count	0	13	208	206	132	119	32	11	6	727

PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023

APPENDIX A – MEMBERSHIP INFORMATION

Chart A-1

Active Count Distribution



**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX A – MEMBERSHIP INFORMATION

Table A-6

Retirees, Disabled, Beneficiaries and Alternate Payees by Attained Age and Benefit Effective Date as of June 30, 2023										
FYE										
Benefit										
Effective	Under 55	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 and up	Total
Prior to										
1995	0	0	2	2	2	1	4	5	25	41
1996	0	0	0	0	0	0	4	2	1	7
1997	0	0	0	0	1	0	6	7	1	15
1998	0	0	0	1	1	0	3	5	1	11
1999	0	0	0	0	0	0	5	11	0	16
2000	0	0	0	1	0	3	3	12	0	19
2001	0	1	0	0	0	2	13	6	0	22
2002	0	0	1	1	0	7	13	5	0	27
2003	0	0	0	3	1	8	19	3	0	34
2004	0	0	1	3	2	18	18	3	1	46
2005	0	0	2	2	7	17	22	3	0	53
2006	0	2	1	2	14	29	15	3	0	66
2007	0	2	1	0	13	47	11	3	0	77
2008	0	1	2	3	23	40	12	3	0	84
2009	1	0	4	6	30	39	7	1	0	88
2010	0	1	5	9	18	44	10	1	1	89
2011	1	4	2	6	39	33	9	1	0	95
2012	1	2	3	18	59	28	6	2	0	119
2013	1	2	1	24	42	20	1	1	0	92
2014	0	3	3	28	55	16	2	1	0	108
2015	3	1	9	18	50	12	2	0	0	95
2016	1	1	8	42	61	14	2	1	1	131
2017	1	4	22	49	37	7	1	1	1	123
2018	1	3	21	61	36	16	1	0	0	139
2019	2	4	35	55	32	11	1	0	0	140
2020	1	14	37	56	28	6	4	0	1	147
2021	2	9	40	44	13	5	2	0	1	116
2022	1	18	57	34	7	1	0	0	0	118
2023	3	14	43	23	10	2	0	0	0	95
Missing	0	2	5	8	2	5	3	2	0	27
Total	19	88	305	499	583	431	199	82	34	2,240
Average Current Age	71.5									
Average Annual Pension	\$ 24,279									

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX A – MEMBERSHIP INFORMATION

Chart A-2

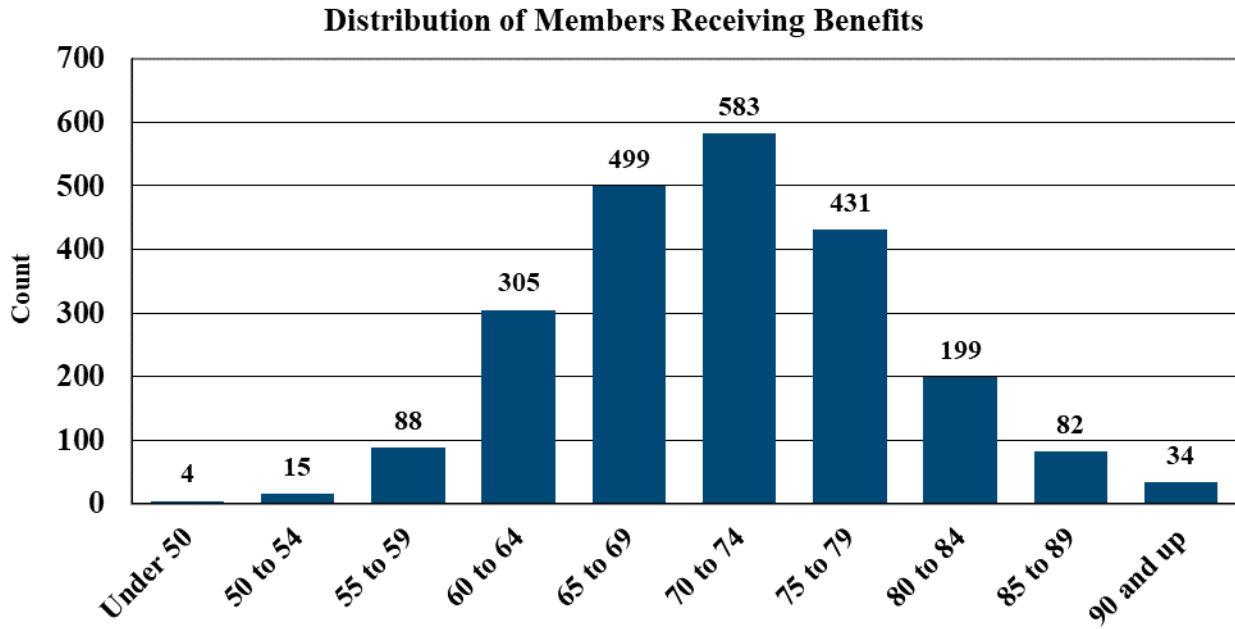
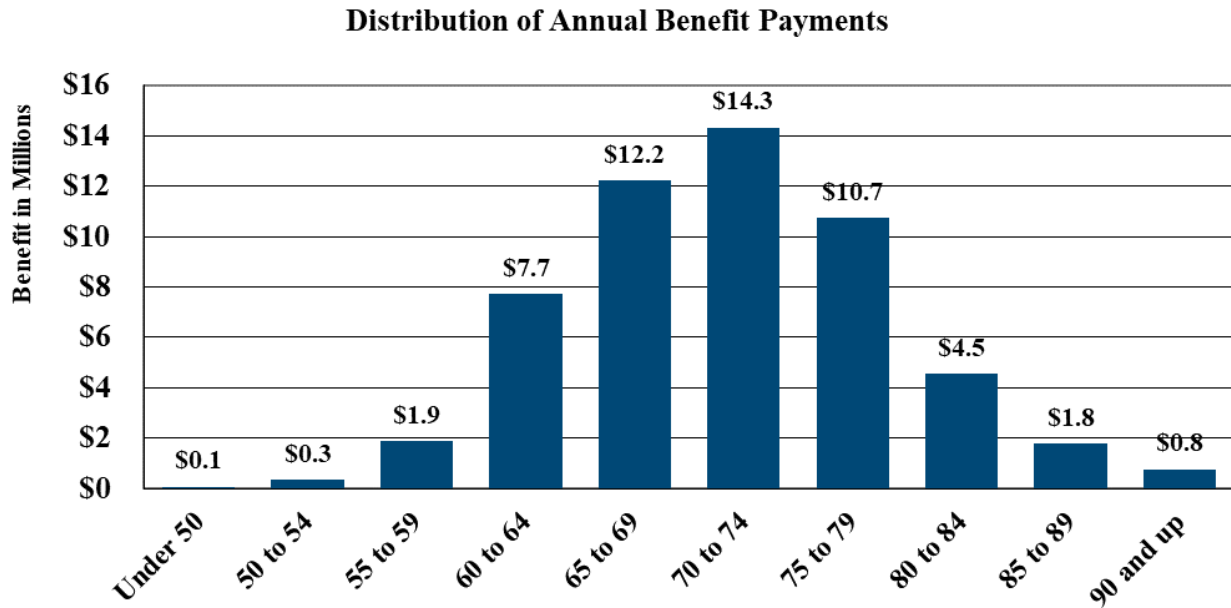


Chart A-3



**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial Assumptions

The inflation, salary increase, and return on assets assumptions were adopted by the trustees at their June 13, 2022 meeting based on our recommendations. The mortality assumptions were adopted by the trustees at their September 23, 2021 meeting based upon Cheiron's ATU mortality experience study and our recommendations. Other actuarial assumptions were adopted by the trustees at their May 6, 2020 meeting based upon an experience study and our recommendations. Please refer to the experience study report and the presentations at the September 23, 2021 and June 13, 2022 trustee meetings for the rationale for each assumption.

1. Long-Term Expected Return on Assets (effective June 30, 2022)

6.25% compounded annually net of investment management and custodial fees.

2. Low-Default-Risk Obligation Measure Discount Rate (effective June 30, 2023)

The discount rate used to calculate the Low-Default-Risk Obligation Measure (LDRM) is calculated as the single equivalent rate from matching projected future benefit cash flows to the FTSE Pension Discount Curve as of June 30th. This curve was selected because it reflects the types of fixed-income securities the Plan would likely invest in if the Trustees wanted to match cash flows. The single equivalent rate for this valuation is 4.90%

3. Salary Increases (effective June 30, 2022)

3.25%, compounded annually.

4. Pre-Retirement Benefit Rate Increases

The benefit rates used to calculate retirement and temporary disability benefits are assumed to increase with salary increases (3.25%) until benefit commencement.

5. Price Inflation (effective June 30, 2022)

2.75%, compounded annually.

6. Post-Retirement Benefit Increases

Benefit payments for members who retired prior to August 1, 2012 are assumed to increase with price inflation (2.75%), and benefit payments for members who retire on or after August 1, 2012 are assumed to increase with 90% of price inflation (2.475%).

After commencement, temporary disability benefit payments are assumed to increase with price inflation (2.75%).

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

7. Administrative Expenses (effective July 1, 2020)

\$330,000 per year beginning FYE 2021 and increasing with price inflation thereafter. Expenses are assumed to be paid midyear.

8. Base Mortality Rates (effective July 1, 2021)

2016 Cheiron ATU mortality tables. Separate tables by sex for employees, healthy retirees, and disabled retirees. Sample Rates are shown in the table below.

2016 Cheiron ATU Mortality Tables						
Age	Active Employees		Service Retirees		Disabled Retirees	
	Male	Female	Male	Female	Male	Female
30	0.0485%	0.0380%			0.9632%	0.3098%
35	0.0562%	0.0513%			1.1224%	0.4766%
40	0.0640%	0.0723%			1.2844%	0.6769%
45	0.0793%	0.1008%			1.8315%	0.9686%
50	0.1134%	0.1514%	0.6846%	0.3411%	2.1187%	1.4759%
55	0.1735%	0.2387%	0.8977%	0.5195%	2.4130%	1.8518%
60	0.2724%	0.3645%	1.1230%	0.7617%	2.7997%	2.0617%
65	0.4082%	0.5243%	1.3088%	1.1026%	3.3476%	2.2110%
70	0.7245%	0.8362%	1.9829%	1.6328%	4.1983%	2.7203%
75	1.3403%	1.3785%	3.2716%	2.6310%	5.7023%	3.8567%
80	2.5212%	2.2850%	5.5953%	4.4327%	8.1570%	5.9047%
85			9.6469%	7.6908%	12.1627%	9.2619%
90			15.7074%	13.4105%	18.6161%	13.5816%

9. Mortality Improvement Scale (effective July 1, 2021)

Mortality rates are applied on a generational basis using the MP-2020 mortality improvement scale to adjust base mortality rates beginning in 2016.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

10. Rates of Retirement (effective July 1, 2020)

All active members and management transfers are assumed to retire by age 70. For those eligible to retire, the assumed rates of retirement prior to age 70 vary by sex and years of service as follows:

Age	Active Rates of Retirement			
	Males		Females	
	Under 20 Years	20+ Years	Under 20 Years	20+ Years
55	3.0%	4.0%	4.0%	6.0%
56	3.0	4.0	6.0	6.0
57	3.0	7.5	8.0	8.0
58	4.0	15.0	15.0	20.0
59	6.0	7.0	15.0	15.0
60	8.0	11.0	15.0	15.0
61	10.0	15.0	25.0	25.0
62	20.0	35.0	35.0	35.0
63	17.5	20.0	25.0	25.0
64	22.5	25.0	20.0	25.0
65	27.5	30.0	35.0	35.0
66 – 69	35.0	35.0	40.0	40.0
70+	100.0	100.0	100.0	100.0

Terminated vested members are assumed to retire at their earliest unreduced retirement age. Disabled members are assumed to retire at age 62.

11. Form of Benefit (effective July 1, 2014)

Upon retirement, members who are married or have a domestic partner are assumed to elect the following form of payment:

Form of Payment	Election Rate
Single Life Annuity	33 1/3%
66 2/3% Joint & Survivor Annuity	66 2/3%

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

12. Rates of Disability (effective July 1, 2020)

CalPERS 2017 Industrial Disability Table for County Peace Officers multiplied by 83.1 percent. Sample rates of disability are shown below.

Age	Rate of Disability
30	0.2069%
35	0.3075
40	0.4263
45	0.5584
50	0.7637
55	1.2507
60	1.4459

85% of disabled members are assumed to qualify for Social Security disability benefits.

13. Rates of Termination (effective July 1, 2020)

Assumed termination rates are shown below:

Years of Vesting Service	Rates of Termination	
	Males	Females
Less than 10	2.00%	3.00%
10	5.00	5.00
11	3.50	3.50
12	3.00	3.00
13	2.50	2.75
14	2.25	2.60
15	2.00	2.50
16	1.90	2.40
17	1.80	2.30
18	1.70	2.20
19	1.60	2.10
20+	1.50	2.00

14. Unused Sick Leave Benefits (effective July 1, 2020)

Active members are assumed to increase their accumulated sick leave hours 30.0 hours each year.

Active Management Transfers are not assumed to return to the Union Plan following their transfer date and are not assumed to receive the unused sick leave benefit. (effective July 1, 2012)

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

15. Probability of Marriage/Domestic Partner (effective July 1, 2014)

66 2/3% of members are assumed to be married or have a domestic partner.

16. Age of Spouse/Domestic Partner (effective July 1, 2020)

Spouses and domestic partners of male retirees are assumed to be female and three years younger than the retiree. Spouses and domestic partners of female retirees are assumed to be male and two years older than the retiree. Actual spouse demographic data is reflected following benefit commencement.

17. Future Service Credits

Active and disabled members are assumed to earn one year of vesting service and one year of benefit service each future year. Transfers to Management are assumed to earn one year of vesting service and no benefit service each future year.

18. Mini-Run to Full Time (effective July 1, 2020)

Active mini-run members are assumed to transfer to full time at the following rates:

Years of Credited Service	Annual Probability
Less than 4	25.0%
4 or more	3.5%

19. Active Management Transfers (effective July 1, 2020)

Demographic assumptions for active members who transfer to Management are the same as those adopted for the TriMet Defined Benefit Retirement Plan for Management and Staff Employees.

20. Changes Since the Last Valuation

The LDRM discount rate assumption was added.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Contribution Allocation Procedure (effective for FYE 2024 contributions)

The contribution allocation procedure determines a range of Actuarially Determined Contribution amounts, including a minimum contribution, a maximum contribution, a recommended contribution, and a Reasonable Actuarially Determined Contribution. Because the Plan has been closed to new entrants since August 1, 2012, and the Actuarial Liability is projected to begin declining as benefits are paid out, the Plan's funding policy differs significantly from what would be used for an ongoing pension plan. The objective is to maintain a well-funded pension plan without developing a surplus that could not be used efficiently until all benefits have been paid. Consequently, the funding policy targets maintaining a funded ratio between 80% and 90% rather than the normal target of 100%.

The contribution allocation procedure uses various components as described below. All components were adopted as part of the Plan's Funding Policy by the Trustees on August 11, 2023.

1. Actuarial Cost Method

The Entry Age Actuarial Cost Method was used for active employees, whereby the normal cost is computed as the level annual percentage of pay required to fund all benefits between each member's date of hire and last assumed date of employment. The Actuarial Liability is the difference between the present value of future benefits and the present value of future normal costs. Or, equivalently, it is the accumulation of normal costs for all periods prior to the valuation date. The normal cost and Actuarial Liability are calculated on an individual basis. The sum of the individual amounts is the normal cost and Actuarial Liability for the Plan. The Actuarial Liability for the Plan represents the target amount of assets the Plan should have as of the valuation date according to the actuarial cost method.

2. Asset Valuation Method

The Actuarial Value of Assets is equal to the Market Value of Assets.

3. Amortization Method

Amortization payments are developed separately for amounts needed to reach an 80% funded ratio and for amounts above the 80% threshold.

If the Plan is less than 80% funded, the difference between 80% of the Actuarial Liability and the Market Value of Assets is amortized using a 10-year layered amortization as a level dollar amount. Once the Plan reaches 80% funded, all amortization layers are eliminated.

For any UAL amount between 80% and 100% funding levels a payment to maintain the funding status is calculated equal to the greater of interest on this portion of the UAL and the benefit payments expected to be made during the year multiplied by one minus the funded percentage.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

If the Plan is more than 80% funded, the minimum contribution is based on amortizing the UAL over a rolling 40-year period as a level percentage of payroll.

As noted above, these amortization methods are not designed to get the Plan to 100% funded until all benefits are paid.

4. Adjustments to Outputs

Funding Level	Less than 80%	80% to 90%	90% or More
Minimum Contribution	<ul style="list-style-type: none"> • Normal cost, plus • Administrative expenses, plus • 10-year layered amortization payment to reach 80%, plus • The payment to maintain the funded status. 	<ul style="list-style-type: none"> • Normal cost, plus • Administrative expenses, plus • 40-year rolling amortization payment. 	<ul style="list-style-type: none"> • Normal cost, plus • Administrative expenses, plus • 40-year rolling amortization payment.
Maximum Contribution	<ul style="list-style-type: none"> • The amount necessary to reach 80% funded in one year if all assumptions are met. 	<ul style="list-style-type: none"> • Normal cost, plus • Administrative expenses, plus • The payment to maintain the funded status. 	<ul style="list-style-type: none"> • Normal cost, plus • Administrative expenses, plus • 40-year rolling amortization payment.
Recommended Contribution	<ul style="list-style-type: none"> • The greater of the Minimum Contribution or TriMet’s budget for pension and OPEB trust contributions, but no greater than the Maximum Contribution. 	<ul style="list-style-type: none"> • Prorated based on funded percentage between Maximum contribution at 80% funded and Minimum Contribution at 90% funded. 	<ul style="list-style-type: none"> • Normal cost, plus • Administrative expenses, plus • 40-year rolling amortization payment.

The Reasonable Actuarially Determined Contribution is calculated as the greater of the minimum contribution or normal cost plus administrative expenses plus an amortization payment on the UAL based on a 25-year amortization as a level percent of pay.

5. Changes Since the Last Valuation

The funding policy was completely re-written effective with this valuation for FYE 2024 contributions. The prior amortization methods and five-year asset smoothing method were eliminated.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

1. Eligibility

All ATU 757 bargaining unit employees of TriMet (TriMet Union employees) hired before August 1, 2012. TriMet Union employees who transfer to a management position continue to earn service for vesting purposes and retirement eligibility. However, no additional benefits are earned for continuous service as a management employee.

TriMet Union employees hired on or after August 1, 2012 are not eligible to participate in this Plan.

Members who are re-employed as an eligible employee on or after August 1, 2012 may recommence participation if the rehire date is before the earlier of (1) 36 months following termination or (2) the date their break in service exceeds their continuous service before the break in service.

Members who transfer from an eligible employee to an ineligible employee may recommence participation if they transfer back to an eligible employee on or after August 1, 2012 and they did not have a termination date between transfers.

2. Credited Service

All periods of service during which the employee is a member of the bargaining unit represented by ATU 757, working either as a full-time employee or mini-run operator, is entitled to payment for services rendered to TriMet and is eligible to participate in this Plan. Continuous service includes periods of layoff due to reduction in force of less than five years, authorized leave of absences if certain requirements are met, and time while serving as an officer of the ATU 757.

Continuous service is measured using elapsed time. Each 12-month period of continuous service equals one year of continuous service and partial years are based on the number of days worked divided by 365.25.

3. Vesting Service

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

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

4. Normal Retirement

Eligibility

For participants who earn at least 10 years of vesting service, the Normal Retirement Age is determined from the following schedule:

Severance from Service Date	Normal Retirement Age
December 1, 1994 to November 30, 1998	62
December 1, 1998 to November 30, 2000	61
December 1, 2000 to November 30, 2002	60
December 1, 2002 to November 30, 2004	59
On or after December 1, 2004	58

Benefit

The normal retirement benefit for participants retiring or terminating after February 1, 1992 is determined by multiplying continuous service times the benefit rate in effect on the date of retirement or termination of employment, whichever is earlier. Mini-run operators receive 75% of the benefit rate shown below.

Effective Beginning	Benefit Rate	Effective Beginning	Benefit Rate
February 1, 1992	\$42.00	September 1, 2008	\$70.84
September 1, 1992	43.26	September 1, 2009	72.96
September 1, 1993	44.13	February 1, 2010	72.96
September 1, 1994	44.57	February 1, 2011	75.52
September 1, 1995	47.02	February 1, 2012	78.97
September 1, 1996	48.43	February 1, 2013	78.97
September 1, 1997	50.27	February 1, 2014	78.97
September 1, 1998	51.93	February 1, 2015	81.34
September 1, 1999	53.49	February 1, 2016	83.78
September 1, 2000	55.49	February 1, 2017	86.29
September 1, 2001	57.15	February 1, 2018	89.10
September 1, 2002	58.87	February 1, 2019	92.00
September 1, 2003	60.64	February 1, 2020	94.76
September 1, 2004	62.45	February 1, 2021	97.13
September 1, 2005	64.33	February 1, 2022	99.32
September 1, 2006	66.26	February 1, 2023	106.77
September 1, 2007	68.25		

Beginning December 1, 2009, benefit rates are adjusted on February 1 each year by the amount of any specified general wage adjustment under the Working and Wage Agreement during the preceding 12 months.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

A benefit derived from unused sick leave is added to the above benefit as described below.

Unused Sick Leave

Vested participants who terminate after becoming eligible for early retirement will have unused accumulated sick leave up to the maximum accumulated sick leave converted to a monthly benefit at a rate of \$.30 per hour for each hour of unused accrued sick leave.

Severance from Service Date	Maximum Accumulated Sick Leave
December 1, 1998	1,400 hours
December 1, 2003	1,450 hours
December 1, 2004	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

5. Early Retirement

Eligibility

A participant may retire prior to his normal retirement date if he has 10 years of vesting service and is at least 55 years of age.

From December 1, 2003 to December 1, 2009, an active participant may retire with unreduced benefits after he has earned 30 years of continuous service, regardless of age.

Benefit

The early retirement benefit will be reduced to be actuarially equivalent to the normal retirement benefit.

6. Forms of Payment

The following forms of payment are available:

- Single Life Annuity
- 66 2/3% Joint and Survivor Annuity

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

7. Disability Retirement

Eligibility

An active participant who becomes disabled after 10 years of continuous service may receive a disability benefit if he becomes permanently disabled from performing the participant's occupation while employed with TriMet prior to reaching Social Security retirement age (62). Disability benefits are paid from the Plan until the participant reaches age 62.

Benefit

A benefit payable during the period of disability is determined from the table below. If the participant is entitled to disability benefits under Social Security, the benefits shown below are doubled. Participants who are mini-run operators on the date they become permanently disabled will receive 75% of the amounts below.

Effective	10 Years of Continuous Service	15 Years of Continuous Service	20 Years of Continuous Service
February 1, 1992	\$ 388.60	\$ 468.38	\$ 544.07
February 1, 1993	400.26	482.43	560.39
February 1, 1994	408.27	492.08	571.60
February 1, 1995	434.80	524.06	608.75
February 1, 1996	441.76	532.45	618.49
February 1, 1997	457.22	551.08	640.14
February 1, 1998	472.31	569.27	661.26
February 1, 1999	481.76	580.66	674.49
February 1, 2000	502.72	605.92	703.83
February 1, 2001	519.71	626.40	727.62
February 1, 2002	533.90	643.50	747.48
February 1, 2003	545.01	656.88	763.03
February 1, 2004	569.92	686.90	797.90
February 1, 2005	586.50	706.89	821.12
February 1, 2006	602.28	725.91	843.21
February 1, 2007	620.47	747.83	868.67
February 1, 2008	643.37	775.42	900.72
February 1, 2009	669.62	807.06	937.47
February 1, 2010	674.51	812.95	944.31
February 1, 2011	698.19	841.49	977.46
February 1, 2012	730.10	879.95	1,022.13
May 1, 2013	745.43	898.43	1,043.59
May 1, 2014	755.64	910.74	1,057.89
May 1, 2015	766.98	924.40	1,073.76

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Effective	10 Years of Continuous Service	15 Years of Continuous Service	20 Years of Continuous Service
May 1, 2016	766.98	924.40	1,073.76
May 1, 2017	774.50	933.46	1084.28
May 1, 2018	793.32	956.14	1,110.63
May 1, 2019	817.12	984.82	1,143.95
May 1, 2020	836.49	1,008.16	1,171.06
May 1, 2021	850.87	1,025.50	1,191.20
May 1, 2022	897.67	1,081.90	1,256.72
May 1, 2023	960.51	1,157.64	1,344.69

Disability benefits increase at the same time and percentage as post-retirement benefit increases for participants who retired before August 1, 2012.

The disabled participant’s retirement benefit at age 62 is calculated using service that includes continuous service during disability as if the participant remained in active employment from the date of disability to age 62, and the benefit rate in effect at age 62.

8. Vesting

A participant who terminates employment with at least ten years of vesting service as of the date of termination will be 100% vested.

9. Contributions

Contributions are made to the Trust Fund by TriMet. There are no member contributions. The Working and Wage Agreement between the ATU and TriMet establishes a minimum amortization period of 40 years. The necessary amount will be determined in accordance with accepted actuarial principles.

10. Pre-Retirement Death Benefit

Married Employee or Domestic Partner

If a vested participant, the participant’s spouse or domestic partner will receive 50% of the accrued benefit. The benefit is paid to the spouse when the spouse attains age 62 (or, if later, the date of the participant’s death). 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 domestic partner is younger than age 62, the benefit is actuarially reduced to reflect the age of the domestic partner on the date of benefit commencement.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
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APPENDIX C – SUMMARY OF PLAN PROVISIONS

Disability

If a participant receiving disability benefits dies on or after age 55 but prior to age 62, the surviving spouse or domestic partner may elect to receive either the benefits described in the paragraph immediately above or the survivor portion of the 66 2/3% joint and survivor annuity.

11. Post-retirement Cost-of-Living Benefit

Prior to August 1, 2012, post-retirement benefits were increased each February 1 by the aggregate amount of any specified general wage adjustment under the Working and Wage Agreement during the preceding 12 months.

Effective August 1, 2012, post-retirement benefits are increased each May 1 during the period of the agreement as follows:

- For participants who retired before August 1, 2012, the post-retirement benefit increase is 100% of the percentage increase in the U.S. Urban Wage Earners and Clerical Workers Consumer Price Index (CPI-W West – Size Class B/C) (annual average) for the previous calendar year. Annual increases will not be more than 7% per year.
- For participants who retire on or after August 1, 2012, the post-retirement benefit increase is 90% of the percentage increase in the U.S. Urban Wage Earners and Clerical Workers Consumer Price Index (CPI-W West - Size Class B/C) (annual average) for the previous calendar year. Annual increases will not be more than 7% per year.

12. Changes Since the Last Valuation

The Benefit Rate and the temporary disability benefits were increased.

Note: The summary of major plan provisions is designed to outline principal plan benefits. If TriMet should find the plan summary not in accordance with the actual provisions, the actuary should immediately be alerted so the proper provisions are valued.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX D – GASB 67/68 CROSSOVER TEST

FYE	Projected Beginning Fiduciary Net Position	Projected Contribution	Projected Admin Expenses	Projected Benefit Payments	Projected Investment Earnings	Projected Ending Fiduciary Net Position	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments
2024	708,822,532	25,000,000	354,505	55,474,064	43,352,616	721,346,578	55,474,064	0
2025	721,346,578	25,000,000	364,254	57,737,814	44,065,398	732,309,909	57,737,814	0
2026	732,309,909	22,905,505	374,271	59,646,904	44,627,082	739,821,320	59,646,904	0
2027	739,821,320	17,816,506	384,563	61,652,378	44,877,886	740,478,771	61,652,378	0
2028	740,478,771	17,768,488	395,139	63,476,746	44,861,026	739,236,401	63,476,746	0
2029	739,236,401	17,716,300	406,005	65,187,537	44,728,786	736,087,945	65,187,537	0
2030	736,087,945	17,664,166	417,170	66,802,682	44,480,351	731,012,610	66,802,682	0
2031	731,012,610	17,595,272	428,642	68,189,844	44,117,977	724,107,373	68,189,844	0
2032	724,107,373	17,562,817	440,430	69,613,363	43,641,227	715,257,624	69,613,363	0
2033	715,257,624	17,455,358	452,542	70,749,832	43,049,462	704,560,070	70,749,832	0
2034	704,560,070	17,349,561	464,987	71,597,754	42,351,129	692,198,019	71,597,754	0
2035	692,198,019	17,203,560	477,774	72,221,197	41,554,427	678,257,035	72,221,197	0
2036	678,257,035	17,034,779	490,913	72,564,106	40,666,963	662,903,758	72,564,106	0
2037	662,903,758	16,831,083	504,413	72,673,875	39,697,320	646,253,874	72,673,875	0
2038	646,253,874	16,613,056	503,898	72,599,731	38,652,290	628,415,591	72,599,731	0
2039	628,415,591	16,344,523	501,505	72,254,939	37,539,818	609,543,488	72,254,939	0
2040	609,543,488	16,053,003	497,880	71,732,683	36,367,525	589,733,452	71,732,683	0
2041	589,733,452	15,737,638	492,748	70,993,288	35,142,605	569,127,659	70,993,288	0
2042	569,127,659	15,393,301	486,154	70,043,232	33,873,588	547,865,162	70,043,232	0
2043	547,865,162	15,024,431	478,277	68,908,331	32,568,500	526,071,486	68,908,331	0
2044	526,071,486	14,634,808	469,395	67,628,696	31,234,060	503,842,262	67,628,696	0
2045	503,842,262	14,232,301	459,313	66,176,023	29,877,364	481,316,592	66,176,023	0
2046	481,316,592	13,798,581	448,072	64,556,485	28,506,351	458,616,967	64,556,485	0
2047	458,616,967	13,347,180	435,742	62,779,991	27,128,786	435,877,201	62,779,991	0
2048	435,877,201	12,890,055	422,886	60,927,798	25,750,881	413,167,454	60,927,798	0
2049	413,167,454	12,414,409	409,095	58,940,855	24,378,459	390,610,372	58,940,855	0
2050	390,610,372	11,927,495	394,565	56,847,352	23,018,533	368,314,484	56,847,352	0
2051	368,314,484	11,432,937	379,370	54,658,245	21,677,660	346,387,465	54,658,245	0
2052	346,387,465	10,937,987	363,794	52,414,101	20,361,535	324,909,091	52,414,101	0
2053	324,909,091	10,438,785	348,031	50,142,938	19,074,156	303,931,063	50,142,938	0

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX D – GASB 67/68 CROSSOVER TEST

FYE	Projected Beginning Fiduciary Net Position	Projected Contribution	Projected Admin Expenses	Projected Benefit Payments	Projected Investment Earnings	Projected Ending Fiduciary Net Position	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments
2054	303,931,063	9,939,019	331,908	47,819,975	17,819,637	283,537,836	47,819,975	0
2055	283,537,836	9,442,111	315,700	45,484,873	16,602,132	263,781,506	45,484,873	0
2056	263,781,506	8,948,958	299,470	43,146,532	15,424,649	244,709,111	43,146,532	0
2057	244,709,111	8,461,052	283,319	40,819,520	14,289,723	226,357,046	40,819,520	0
2058	226,357,046	7,979,610	267,290	38,510,178	13,199,468	208,758,655	38,510,178	0
2059	208,758,655	7,506,246	251,471	36,231,033	12,155,631	191,938,028	36,231,033	0
2060	191,938,028	7,042,412	235,977	33,998,697	11,159,247	175,905,012	33,998,697	0
2061	175,905,012	6,588,714	220,784	31,809,710	10,211,057	160,674,289	31,809,710	0
2062	160,674,289	6,146,333	205,956	29,673,311	9,311,729	146,253,084	29,673,311	0
2063	146,253,084	5,716,427	191,545	27,597,124	8,461,513	132,642,355	27,597,124	0
2064	132,642,355	5,299,883	177,584	25,585,566	7,660,361	119,839,450	25,585,566	0
2065	119,839,450	4,897,600	164,100	23,642,916	6,908,002	107,838,036	23,642,916	0
2066	107,838,036	4,510,376	151,122	21,773,036	6,203,944	96,628,197	21,773,036	0
2067	96,628,197	4,138,837	138,669	19,978,939	5,547,493	86,196,919	19,978,939	0
2068	86,196,919	3,783,532	126,761	18,263,279	4,937,772	76,528,182	18,263,279	0
2069	76,528,182	3,444,901	115,412	16,628,171	4,373,726	67,603,226	16,628,171	0
2070	67,603,226	3,123,267	104,633	15,075,176	3,854,145	59,400,827	15,075,176	0
2071	59,400,827	2,818,912	94,434	13,605,651	3,377,668	51,897,323	13,605,651	0
2072	51,897,323	2,531,983	84,818	12,220,305	2,942,801	45,066,983	12,220,305	0
2073	45,066,983	2,262,516	75,788	10,919,305	2,547,929	38,882,334	10,919,305	0
2074	38,882,334	2,010,486	67,343	9,702,533	2,191,340	33,314,284	9,702,533	0
2075	33,314,284	1,775,783	59,479	8,569,450	1,871,228	28,332,366	8,569,450	0
2076	28,332,366	1,558,228	52,189	7,519,189	1,585,710	23,904,926	7,519,189	0
2077	23,904,926	1,357,635	45,468	6,550,855	1,332,830	19,999,069	6,550,855	0
2078	19,999,069	1,173,783	39,308	5,663,373	1,110,559	16,580,730	5,663,373	0
2079	16,580,730	1,006,401	33,700	4,855,439	916,799	13,614,790	4,855,439	0
2080	13,614,790	855,158	28,634	4,125,446	749,395	11,065,264	4,125,446	0
2081	11,065,264	719,637	24,094	3,471,383	606,149	8,895,572	3,471,383	0
2082	8,895,572	599,313	20,064	2,890,708	484,835	7,068,947	2,890,708	0
2083	7,068,947	493,552	16,522	2,380,358	383,232	5,548,852	2,380,358	0

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX D – GASB 67/68 CROSSOVER TEST

FYE	Projected Beginning Fiduciary Net Position	Projected Contribution	Projected Admin Expenses	Projected Benefit Payments	Projected Investment Earnings	Projected Ending Fiduciary Net Position	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments
2084	5,548,852	401,624	13,443	1,936,793	299,143	4,299,383	1,936,793	0
2085	4,299,383	322,665	10,799	1,555,845	230,426	3,285,830	1,555,845	0
2086	3,285,830	255,714	8,557	1,232,866	175,028	2,475,148	1,232,866	0
2087	2,475,148	199,739	6,683	962,869	131,005	1,836,339	962,869	0
2088	1,836,339	153,634	5,140	740,511	96,551	1,340,874	740,511	0
2089	1,340,874	116,263	3,889	560,296	70,019	962,970	560,296	0
2090	962,970	86,491	2,893	416,754	49,932	679,747	416,754	0
2091	679,747	63,204	2,113	304,491	34,993	471,339	304,491	0
2092	471,339	45,333	1,516	218,357	24,087	320,886	218,357	0
2093	320,886	31,892	1,066	153,586	16,277	214,404	153,586	0
2094	214,404	21,995	735	105,900	10,795	140,558	105,900	0
2095	140,558	14,864	497	71,552	7,025	90,399	71,552	0
2096	90,399	9,840	329	47,355	4,485	57,039	47,355	0
2097	57,039	6,379	213	30,691	2,810	35,324	30,691	0
2098	35,324	4,051	135	19,486	1,729	21,482	19,486	0
2099	21,482	2,522	84	12,130	1,044	12,834	12,130	0
2100	12,834	1,541	51	7,408	620	7,535	7,408	0
2101	7,535	923	31	4,439	362	4,350	4,439	0
2102	4,350	544	18	2,613	208	2,470	2,613	0
2103	2,470	315	10	1,512	117	1,380	1,512	0
2104	1,380	179	6	860	65	758	860	0
2105	758	100	3	482	36	408	482	0
2106	408	55	2	266	19	215	266	0
2107	215	30	1	143	10	111	143	0
2108	111	16	1	75	5	56	75	0
2109	56	8	0	39	3	27	39	0
2110	27	4	0	20	1	13	20	0
2111	13	2	0	9	1	6	9	0
2112	6	1	0	5	0	2	5	0
2113	2	0	0	2	0	1	2	0
2114	1	0	0	1	0	0	1	0

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX E – GLOSSARY OF TERMS

1. Actuarial Liability

The Actuarial Liability is the difference between the present value of future benefits and the present value of total future normal costs. This is also referred to as the “accrued liability” or “actuarial accrued liability.” The Actuarial Liability represents the targeted amount of assets a plan should have as of a valuation date according to the actuarial cost method.

2. Actuarial Assumptions

Estimates of future experience with respect to rates of mortality, disability, turnover, retirement rate or rates of investment income, and salary increases. Demographic actuarial assumptions (rates of mortality, disability, turnover, and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (price inflation, wage inflation, and investment income) are generally based on expectations for the future that may differ from the Plan’s past experience.

3. Actuarial Cost Method

A mathematical budgeting procedure for allocating the dollar amount of the present value of future benefits between future normal cost and Actuarial Liability.

4. Actuarial Gain (Loss)

The difference between actual experience and the anticipated experience based on the actuarial assumptions during the period between two actuarial valuation dates.

5. Actuarial Present Value

The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at the discount rate and by probabilities of payment.

6. Actuarial Valuation Date

The date as of which an actuarial valuation is performed. For GASB purposes, this date may be up to 24 months prior to the GASB 67/68 measurement date and up to 30 months prior to the employer’s financial reporting date.

7. Actuarially Determined Contribution

The payment to the Plan as determined by the actuary using a contribution allocation procedure. It may or may not be the actual amount contributed to the Plan.

APPENDIX E – GLOSSARY OF TERMS

8. Amortization Method

A method for determining the amount, timing, and pattern of payments on the Unfunded Actuarial Liability.

9. Asset Valuation Method

The method used to develop the Actuarial Value of Assets from the Market Value of Assets typically by smoothing investment returns above or below the assumed rate of return over a period of time.

10. Contribution Allocation Procedure

A procedure typically using an actuarial cost method, an asset valuation method, and an amortization method to develop the Actuarially Determined Contribution.

11. Deferred Inflow of Resources

An acquisition of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience gains on the Total Pension Liability, assumption changes reducing the Total Pension Liability, or investment gains that are recognized in future reporting periods.

12. Deferred Outflow of Resources

A consumption of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience losses on the Total Pension Liability, assumption changes increasing the Total Pension Liability, or investment losses that are recognized in future reporting periods.

13. Discount Rate

The rate of interest used to discount future benefit payments to determine the actuarial present value. For purposes of determining an Actuarially Determined Contribution, the discount rate is typically based on the long-term expected return on assets.

14. Entry Age Actuarial Cost Method

The actuarial cost method required for GASB 67 and 68 calculations. Under this method, the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages. The portion of this actuarial present value allocated to a valuation year is called the service cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future service costs is called the Total Pension Liability.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX E – GLOSSARY OF TERMS

15. Funded Status or Funding Ratio

The Market or Actuarial Value of Assets divided by the Actuarial Liability. For purposes of this report, the funded status represents the proportion of the actual assets compared to the target established by the actuarial cost method as of the valuation date. These measures are for contribution budgeting purposes and are not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.

16. Measurement Date

The date as of which the Total Pension Liability and Plan Fiduciary Net Position are measured. The Total Pension Liability may be projected from the actuarial valuation date to the measurement date. The measurement date must be the same as the reporting date for the plan.

17. Net Pension Liability

The liability of employers and nonemployer contributing entities to plan members for benefits provided through a defined benefit pension plan. It is calculated as the Total Pension Liability less the Plan Fiduciary Net Position.

18. Normal Cost

The portion of the present value of future benefits allocated to the current year by the actuarial cost method.

19. Plan Fiduciary Net Position

The fair or Market Value of Assets.

20. Present Value of Future Benefits

The actuarial present value of all benefits both earned as of the valuation date and expected to be earned in the future by current plan members based on current plan provisions and actuarial assumptions.

21. Reporting Date

The last day of the plan or employer's fiscal year.

**PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2023**

APPENDIX E – GLOSSARY OF TERMS

22. Service Cost

The portion of the actuarial present value of projected benefit payments that is attributed to the current period of employee service in conformity with the requirements of GASB 67 and 68. The service cost is the normal cost calculated under the Entry Age Actuarial Cost Method.

23. Total Pension Liability

The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of GASB 67 and 68. The Total Pension Liability is the Actuarial Liability calculated under the Entry Age actuarial cost method.

24. Unfunded Actuarial Liability (UAL)

The Unfunded Actuarial Liability is the difference between Actuarial Liability and either the Market or the Actuarial Value of Assets. This value is sometimes referred to as “unfunded actuarial accrued liability.” It represents the difference between the actual assets and the amount of assets expected by the actuarial cost method as of the valuation date.



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