

East Lampeter Township Police Retirement Plan

Actuarial Valuation as of January 1, 2021



Municipal

Finance

Partners, Inc.

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Executive Summary

The purpose of this report is to establish the pension plan's funding requirements under Act 205 of 1984 as well as to satisfy the reporting requirements of the Act.

Contribution Requirements: the Minimum Municipal Obligation

[Act 205 of 1984](#) requires plan sponsors to contribute a minimum amount to the plan each year called the [Minimum Municipal Obligation](#), or MMO. These charts show the plan's financial requirements, as determined by the MMO, for the last several years through 2022, plus projected MMOs for 2023 and 2024, based upon this actuarial valuation, and how the MMO is funded.



(Click on chart for larger version)

The MMO is the sum of the plan's normal cost, administrative expenses and any amortization payment, less expected member contributions and any funding adjustment. The MMO may be funded by general municipal pension system State Aid allocated to the plan; however, the municipality is ultimately

ly responsible for funding the MMO.

The MMO for 2021 was determined in 2020, based on the January 1, 2019 actuarial valuation and estimated 2020 compensation. These charts show what the 2021 MMO would have been based on the January 1, 2021 actuarial valuation and actual 2020 compensation compared to the actual 2021 MMO.



MMO Components:

- **Normal Cost: 18.9%** of active member compensation
- **Administrative Expenses: 4.1%** of active member compensation
- A **Funding Adjustment** of **\$94,644** reduces the MMO
- **Member Contributions** of **5.0%** of active member compensation reduce the MMO

The impact of the January 1, 2021 actuarial valuation on the MMO is as follows:

- The Normal Cost has remained constant at 18.9% of compensation.
- Administrative expenses have decreased from 4.7% to 4.1% of compensation.
- The amortization payment has been replaced

by a funding adjustment of \$94,644, due to actuarial gains.

The actuarial gains are the net of:

- Investment gains of \$952,031,
- Experience gains of \$320,231, and
- A funding deviation of \$264,081 as plan contributions were less than expected. Funding deviations are generally caused by the timing of the plan's MMOs as the 2019 and 2020 contributions were based on the January 1, 2017 actuarial valuation.

These charts show the makeup of plan assets and liabilities as of the valuation date.



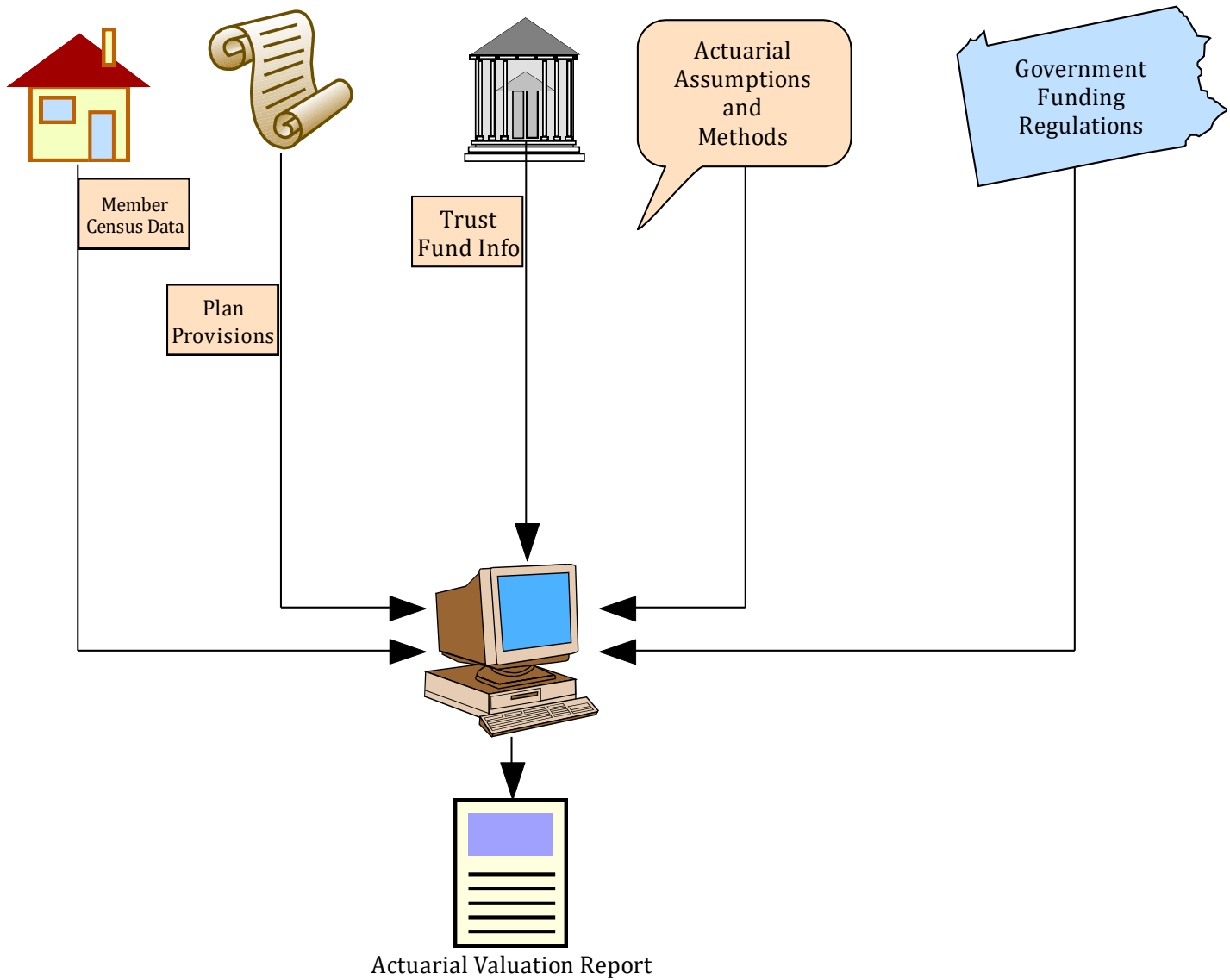
The actuarial valuation is based upon the following inputs:

- Investment performance
- Participant information
- Plan provisions
- Actuarial assumptions and methods
- [Act 205](#) funding rules

The remainder of this report details how these inputs impact the plan's funding requirements. The de-

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tailed MMO calculations for 2019 and 2020 are found on [page 13](#). The determination of the MMO components for future years is shown on [pages 7-10](#).

Investment Performance

The plan's contribution requirements are dependent upon the relative sizes of its assets and its liabilities. In most years, the fluctuations in assets are greater

than changes in liabilities, which tend to grow more predictably. This valuation reflects the plan's investment performance during 2019 and 2020.

The market value of plan assets has grown from \$22,245,307 at December 31, 2018 to \$30,491,186 at December 31, 2020. The fund earned returns of 19.84% in 2019 and 15.11% in 2020.

The plan uses an *actuarial smoothing* method to reduce the impact of year-to-year fluctuations in investment returns. The actuarial value of assets under the smoothing method is \$27,750,330 as of January 1, 2021.

On an actuarial basis, the fund earned 7.19% in 2019 and 10.60% in 2020, compared to the actuarially assumed rate of 7.0%.

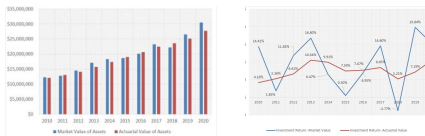
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The greater than expected returns caused an investment gain of \$952,021 (about 3.4% of plan assets) during 2019 and 2020.

[Page 11](#) of this report contains detailed information regarding the pension fund activity. [Page 12](#) shows how the fund was invested at the end of 2019 and 2020.

These charts show the fund balance and investment return histories.



Plan Membership

The plan's liabilities are determined based on the plan membership information and the plan's benefit provisions, projected into the future using actuarial assumptions. Changes in plan membership, such as deaths, terminations, new hires and changes in salaries will cause *liability* or *experience* gains and losses to the extent that experience differs from the assumptions.

During 2019 and 2020, 4 new officers joined the plan and 1 officer entered the DROP plan, increasing the active membership from 34 to 37 officers. As

of January 1, 2021 the plan membership consisted of 37 active officers, 1 vested former member, 1 DROP plan member, 18 retired officers and 2 spouse beneficiaries receiving a pension.

Since the prior actuarial valuation, the plan had an experience gain of \$320,231 (1.2% of liabilities). This was due mostly to salary increases that were less than expected.

[Pages 14-15](#) contain information regarding changes in plan membership during 2019 and 2020. The final pages of the report contain detailed member information.

Actuarial Assumptions and Methods

Once we have calculated the actuarial value of liabilities at the valuation date, we use an Actuarial Cost Method to determine how those liabilities (net of current plan assets) will be funded in the future.

For this actuarial valuation, we are using the [Entry Age Normal Actuarial Cost Method](#) which determines a set of annual costs (the Normal Cost) to fund the member's pension from his plan entry date to his ex-

pected retirement date. These normal costs are equal as a percentage of expected payroll; i.e., they increase each year at the rate of assumed increase in salary.

Under the Entry Age method, the actuarial value of past normal costs at the valuation date, called the *actuarial accrued liability*, is compared to the plan assets and any shortfall is amortized over future years. The Minimum Municipal Obligation (MMO) is calculated as the sum of each year's normal costs, plus expected administrative expenses and the amortization payment, less any expected member contributions and any funding adjustment when assets exceed liabilities.

The method used to determine the actuarial value of assets is also a part of the plan's funding method. This valuation uses a method that recognizes market value gains and losses over a five-year period.

The detailed calculation of the actuarial value of assets is shown on [page 10](#).

There have been no changes in the plan's actuarial assumptions or methods since the prior actuarial val-

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uation.

A full description of the actuarial assumptions and methods can be found on [page 18](#).

Under Act 205 requirements, we amortize each component of the unfunded liability based upon its source. The amortization period is equal to the average future service of the active plan members; however, it may not exceed the following periods:

- Experience gains and losses: 20 years
- Changes in Plan Benefits—Active Members: 10 years (20 years if change was mandated by law)
- Changes in Plan Benefits—Retired Members: 1 year (10 years if change was mandated by law)
- Changes in Actuarial Assumptions and Methods: 15 years

Plan Benefit Provisions

The provisions of the plan as of the valuation date are based on the plan document and the provisions of Act 600 of 1956, as amended, as well as state and federal law.

The plan's provisions are described in detail on [pages](#)

[15-16](#) of this report.

There have been no changes in plan benefits since the prior actuarial valuation.

Funded Status

A plan's funded status can be measured in a number of ways, such as:

- The level of contributions required to actuarially fund promised plan benefits, as discussed above, or
- Comparing plan assets to plan liabilities (i.e., the *funding percentage*).

The plan's funding percentage has increased from 99.3% as of January 1, 2019 to 103.5% as of January 1, 2021, due to the impact of the actuarial gains. On a market value of assets basis, the funding percentage was 113.8%. The recent history of the funding percentage is shown in this chart.



A Discussion of Risk

The projections that make up an actuarial valuation are expected values which are based on the average, or mean, of the distribution of potential results. Actual results will vary over time. These variances, or devia-

tions from the mean, represent the potential risks (and rewards) inherent in the operation of a pension plan.

Below are five basic types of risk that are characteristic to pension plans and how we work to manage them:

- **Investment Risk** is the potential that investment returns will differ from expectations and is the largest risk a plan faces. We moderate this risk by using actuarial asset smoothing and amortizing gains and losses over future years.

Asset/Liability Mismatch Risk is the potential that changes in assets and liabilities do not match. As financial instruments, pension liabilities behave like bonds; their market value rising and falling as interest rates fall and rise. Equity investments achieve larger returns as a *risk premium*. This risk could be defeased by investing solely in fixed income investments that match the duration of the liabilities, but at the cost of dramatically lower fund returns, leading to significantly higher contributions.

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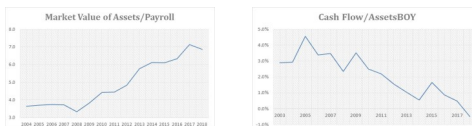
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- **Interest Rate Risk** works in two ways: Higher yields will benefit new investments in bonds or other fixed income investments, while decreasing the value of bonds currently held. It is important to understand the cause of the change; for example, if interest rates rise due to inflationary pressures, the plan's equity investments will generally rise, offsetting the drop in fixed income investments.
- **Longevity and Demographic Risk** is the potential for losses (and gains) on the liability side of the pension balance sheet when plan member experience differs from the demographic assumptions used to predict it. This risk can be mitigated by updating mortality assumptions as new tables are released, reviewing the impact of deviations from expectations and changing assumptions when these reviews and/or experience studies indicate.
- **Contribution Risk** is the potential that contributions will deviate from actuarial requirements or recommendations.

Due to the nature and timing of the [MMO process](#) that applies to municipal pension plans governed by Act 205 of 1984, these losses should be immaterial to a large extent. For plans not governed by Act 205, such as County and State plans, this is a *moral hazard*.

There are many ways that we can measure risk and one of them is to measure the maturity of the plan members. As a plan's membership retires or gets closer to retirement, plan asset levels must grow to fund their benefits, increasing investment risk. In addition, net cash flow (contributions less benefit payments and expenses) decrease and can go negative, increasing the importance of investment returns in supporting the fund.

The charts below show the changes in two maturity measures over recent years.



Actuarial Certification

The purpose of this actuarial valuation report is to determine the plan funding status and project future funding requirements as of January 1, 2021. The report

is the basis for satisfying the funding requirements of Act 205 of 1984.

The normal cost, administrative expense and amortization payment amounts calculated within this report will be the basis for computing the Plan's Minimum Municipal Obligation (MMO or required contribution) for 2022 and 2023 and may be used for calculating the MMO for 2024.

The report also summarizes the pension fund and participant activity during 2019 and 2020.

Determinations for purposes other than determining the plan's funding requirements may differ significantly from the results in this report. Additional determinations are needed for other purposes, such as the plan sponsor's financial statements.

The actuarial valuation is a projection of liabilities based on the plan provisions, financial information, participant data and actuarial assumptions and methods as described within the report. The actuarial valuation is not an exact statement of the Plan's ultimate benefits and liabilities.

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The actuarial valuation is based on actuarial assumptions as to future economic and demographic experience. Future results may differ significantly from the results of the actuarial valuation. Analysis of the sensitivity of the valuation results to future experience was beyond the scope of this assignment.

To the best of my knowledge, this report is complete and accurate, based upon the data furnished to us. The financial data regarding the pension fund, as well as the participant and beneficiary data was provided by the East Lampeter Township.

The participant census and plan asset information used to prepare the January 1, 2021 actuarial valuation were as of January 1, 2021.

The actuarial assumptions and methods used to prepare the actuarial valuation were arrived at by consensus among the Township management and the actuary.

I, Charles B. Friedlander, am President & Chief Actuary, for Municipal Finance Part-

ners, Inc. I am a Member of the American Academy of Actuaries, a Fellow of the Society of Actuaries, a Fellow of the Conference of Consulting Actuaries, and an Enrolled Actuary under ERISA, and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I am available to discuss this report and can be contacted at:

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President & Chief Actuary
Enrolled Actuary No. 20-04194*

January 18, 2022

Date

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Plan Funding Detail

This section contains the development of the plan's funding requirements. The funding components calculated in this section will be the basis for determining the plan's Minimum Municipal Obligation for future years.

The tables below show the development of the plan's normal cost percentage and unfunded actuarial accrued liability.

Normal Cost

Normal Cost (\$ amount)	\$709,393
Normal Cost (% of Payroll)	18.9%

Present Value of Future Benefits

Active Members

Retirement Benefits	\$21,335,911
Death Benefits	36,670
Disability Benefits	431,707
Withdrawal Benefits	1,045,621
Return of Member Contributions	80,133

Total Active Members	\$22,930,042
Vested Former Members	221,912
Retired Members	8,540,898
Disabled Members	0
Surviving Spouse Members	218,280
DROP Account Balances	12,415
Total Present Value of Future Benefits	\$31,923,547
Present Value of Future Normal Costs	(5,119,659)
Actuarial Accrued Liability	\$26,803,888
Actuarial Value of Assets	(27,750,330)
Unfunded Actuarial Accrued Liability	(\$946,442)

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The table below shows changes in the plan's unfunded actuarial accrued liability since the prior actuarial valuation.

Unfunded Actuarial Accrued Liability at 1/1/2019		\$176,938
Normal Cost	1,219,917	
Administrative Expense	308,311	
Interest on Above Items	177,975	
Total		1,706,203
Employer Contributions	(344,350)	
Member Contributions	(367,856)	
General Municipal Pension System State Aid	(744,789)	
Interest on Contributions	(100,336)	
Total		(1,557,331)
Adjustment for Funding Deviation		(264,081)
Modification to Actuarial Assumptions		0
Modification to Active Member Benefits		0
Modification to Retired Member Benefits		0
Actuarial (Gain) or Loss		
Investment (Gain) or Loss	(\$952,021)	
Experience (Gain) or Loss	(320,231)	
Adjustment for Funding Deviation	264,081	
Total		(1,008,171)
Unfunded Actuarial Accrued Liability at 1/1/2021		(\$946,442)

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The Plan's 2021 Minimum Municipal Obligation (MMO) was calculated based on the January 1, 2019 actuarial valuation and 2020 pay as estimated in the fall of 2020. This illustration, based on the January 1, 2021 actuarial valuation and actual 2020 pay, shows how the valuation results impact the calculation of the MMO.

Illustrated Minimum Municipal Obligation

Normal Cost	\$709,393
Administrative Expenses ¹	154,155
Amortization of Unfunded Actuarial Accrued Liability	0
Total Financial Requirement	<u>\$863,548</u>
Member Contributions Anticipated	\$188,161
Funding Adjustment	94,644
Expected State Aid	376,113
Net Municipal Obligation	<u>204,630</u>
Total Financial Requirement	<u>\$863,548</u>

¹ Average of administrative expenses over two prior years:
2019: \$143,127, 2020: \$165,183

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The valuation uses an asset smoothing method to even out the year-to-year fluctuations in the investment markets. Under the method being used for this valuation, the investment gains or losses (i.e., actual vs. expected performance) are recognized over a five-year period. The actuarial value of assets determined under this method is limited to 20% above or below the market value of assets.

	2017	2018	2019	2020
Market Value at January 1	\$20,179,051	\$23,230,274	\$22,245,307	\$26,549,405
Contributions	780,918	687,412	695,678	761,316
Benefit Payments and Expenses	(682,669)	(799,201)	(796,125)	(827,039)
Expected Investment Income	<u>1,415,972</u>	<u>1,622,207</u>	<u>1,553,656</u>	<u>1,856,158</u>
Expected Value at 12/31	\$21,693,272	\$24,740,692	\$23,698,516	\$28,339,840
Market Value at 12/31	<u>23,230,274</u>	<u>22,245,307</u>	<u>26,549,405</u>	<u>30,491,186</u>
Gain or (Loss) ¹	\$1,537,002	(\$2,495,385)	\$2,850,889	\$2,151,346
Recognition Percentage Deferred	<u>20%</u>	<u>40%</u>	<u>60%</u>	<u>80%</u>
Gain or (Loss) to be Recognized in Future Years	\$307,400	(\$998,154)	\$1,710,533	\$1,721,077
Market Value of Assets at 12/31/2020			\$30,491,186	
Total (Gain) or Loss to be Recognized in Future Years			<u>(2,740,856)</u>	
Actuarial Value of Assets at 1/1/2021			<u><u>\$27,750,330</u></u> ²	

¹ Market Value less Expected Value

² Limited to between 80% and 120% of Market Value

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Pension Fund and Member Information

The table below shows the pension fund activity for 2019 and 2020. The following pages show how the pension fund was invested at the end of 2019 and 2020, the development and funding of the 2019 and 2020 Minimum Municipal Obligations, and plan membership activity during 2019 and 2020.

	<u>2020</u>	<u>2019</u>
Market Value of Assets as of Beginning of Year	\$26,549,404.90	\$22,245,306.98
<u>Gross Revenues:</u>		
Member Contributions:		
Member Contributions Received	\$189,508.04	\$178,238.30
Receivable at Beginning of Year	0.00	0.00
Receivable at End of Year	109.25	0.00
Total Member Contributions	<u>\$189,617.29</u>	<u>\$178,238.30</u>
Municipal Contributions		
State Aid Portion	\$376,113.32	\$368,675.94
Local Portion	195,585.68	148,764.06
Total Municipal Contribution	<u>\$571,699.00</u>	<u>\$517,440.00</u>
Interest and Dividend Income:	529,896.37	509,514.15
Realized/(Unrealized) Gains and (Losses) on Investments	<u>3,477,607.74</u>	<u>3,895,030.20</u>
Total Revenues	\$4,768,820.40	\$5,100,222.65
<u>Expenses:</u>		
Member Distributions:		
Total Benefit Payments (Lump Sums)	\$0.00	\$0.00
Total Benefit Payments (Monthly)	(661,855.68)	(652,997.28)
Refund of Member Contributions	0.00	0.00
Total Member Distributions	<u>(\$661,855.68)</u>	<u>(\$652,997.28)</u>
Plan Expenses:		
Actuarial Costs	(\$6,700.00)	(\$10,150.00)
Investment Costs	(155,208.56)	(130,275.39)
Other Administrative Expenses	(3,274.75)	(2,702.06)
Total Plan Expenses	<u>(\$165,183.31)</u>	<u>(\$143,127.45)</u>
Total Expenses	<u>(\$827,038.99)</u>	<u>(\$796,124.73)</u>
Market Value of Assets as of End of Year	<u>\$30,491,186.31</u>	<u>\$26,549,404.90</u>
Investment Return Percentage	<u>15.11%</u>	<u>19.84%</u>

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The table below shows how the pension fund was invested as of December 31, 2019 and December 31, 2020.

<u>Assets:</u>	<u>12/31/2020</u>	<u>12/31/2019</u>
Cash	(\$54,804.22)	\$4,971.91
Receivables:		
Accrued Interest and Dividends Receivable	\$57,909.81	\$63,956.82
Employee Contributions Receivable	109.25	0.00
Employer Contributions Receivable	0.00	0.00
General Municipal Pension System State Aid Receivable	0.00	0.00
Prepaid Pensions	51,355.22	0.00
Total Receivables	\$109,374.28	\$63,956.82
Investments:		
Money Market and Other Cash Investments	\$647,651.32	\$819,214.26
Mutual Funds	1,681,682.41	1,163,280.60
Stocks and Other Equities	19,131,292.15	15,528,078.20
Bonds and Other Fixed Income	6,288,394.98	6,419,270.34
Total Investments	\$27,749,020.86	\$23,929,843.40
Other Assets:		
Alternative Investments	\$2,692,414.75	\$2,563,287.23
Total Other Assets	\$2,692,414.75	\$2,563,287.23
Total Fund Assets	\$30,496,005.67	\$26,562,059.36
<u>Current Liabilities:</u>		
Accounts Payable and Accrued Administrative Expenses	\$0.00	\$0.00
Benefits Payable	0.00	0.00
Net Unsettled Purchases	(4,819.36)	(12,654.46)
Overpayment Due to General Fund	0.00	0.00
Total Current Liabilities	(\$4,819.36)	(\$12,654.46)
Net Assets for Benefits at End of Year	\$30,491,186.31	\$26,549,404.90

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The table below shows the determination and funding of the plan's Minimum Municipal Obligation (MMO) for 2019 and 2020.

<u>Determination of Minimum Municipal Obligation:</u>	<u>2020</u>	<u>2019</u>
Based on Actuarial Valuation as of:	1/1/2017	1/1/2017
Normal Cost Percentage	17.0%	17.0%
Administrative Expense Percentage	4.0%	4.0%
Estimated W-2 Payroll for Previous Year	\$3,575,826	\$3,236,639
Normal Cost	\$607,890	\$550,228
Administrative Expense	143,033	129,466
Annual Cost	<u>\$750,923</u>	<u>\$679,694</u>
Amortization Payment	<u>(433)</u>	<u>(433)</u>
Total Financial Requirement	\$750,490	\$679,261
Member Contributions Anticipated	(178,791)	(161,832)
Funding Adjustment	0	0
Minimum Municipal Obligation	<u><u>\$571,699</u></u>	<u><u>\$517,429</u></u>
<u>Municipal Contributions:</u>		
State Aid Portion	\$376,113	\$368,676
Local Portion	195,586	148,764
Total Municipal Contributions	<u><u>\$571,699</u></u>	<u><u>\$517,440</u></u>
Excess or (Shortfall)	\$0	\$11
<u>State Aid Allocations</u>		
Police Pension Plan Allocation	\$376,113.32	\$368,675.94
Non-Uniformed Pension Plan Allocation	116,270.00	117,771.47
Total State Aid Allocated	<u><u>\$492,383.32</u></u>	<u><u>\$486,447.41</u></u>

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The changes in the plan membership during 2019 and 2020 are shown below.

Active Members

Active Members as of January 1, 2019		34
New Members		4
Returned to Active		0
Members No Longer Active:		
Retired	0	
Entered DROP Plan	(1)	
Disabled	0	
Terminated with Full Vesting	0	
Terminated without Vesting	0	
Total		(1)
Active Members as of January 1, 2021		37
Annual Payroll		\$3,763,215
Average Future Service		11

Vested Former Members

Vested Former Members as of January 1, 2019		1
Terminated with Vested Pension		0
Retired		0
Deceased		0
Returned to Active		0
Vested Former Members as of January 1, 2021		1
Annual Pension		\$16,194

DROP Members

DROP Members as of January 1, 2019		0
New DROP Members		1
Retired		0
Retired Members as of January 1, 2021		1
Annual Pension		\$49,297

Retired Members

Retired Members as of January 1, 2019		18
New Retirees		0
Deceased Retirees		0
Returned to Active		0
Retired Members as of January 1, 2021		18
Annual Pension		\$643,565

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Spouse Beneficiaries of Deceased Members

Spouse Beneficiaries of Deceased Members as of January 1, 2019	2
New Spouse Beneficiaries	0
Deceased Spouse Beneficiaries	0
Returned to Active	0
Spouse Beneficiaries of Deceased Members as of January 1, 2021	<u>2</u>
Annual Pension	<u>\$38,456</u>

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Summary of Plan Provisions

The Plan is governed by a plan document which was restated in its entirety effective January 1, 2003. The following is a summary of the document's provisions; actual benefits are determined by the plan document itself.

Plan Membership

An employee enters the plan on the day he becomes a full-time police officer.

Normal Retirement Benefit

In a defined benefit pension plan, the normal retirement benefit is the basis of all plan benefits. The pension that a member earns under the benefit formula is payable monthly beginning on his normal retirement date and continuing for the remainder of his lifetime. Payments will continue after the retired member's death to his surviving spouse or to dependent children under the age of 18 (or under the age of 24 if attending college) in the amount of 50% of the benefit the member was receiving at the time of his death. Benefits payable before normal retirement are actuarially adjusted from this normal retirement benefit to reflect a longer period of payment.

A member's Normal Retirement Date is the first day of the month after a member turns age 50 and completes 25 years of vesting service. Officers hired prior to January 1, 1994 are eligible for normal retirement benefits at age 50 and completion of 20 years of vesting service.

The Normal Retirement Benefit is calculated as 50% of average compensation. Officers hired after January 1, 1994 and before January 1, 2009 will receive an additional service increment of \$20.00 per month for each completed year of benefit service year of service in excess of 25 years, up to a maximum service increment of \$100.00 per month. For officers hired prior to January 1, 1994, the service increment is \$100.00 per month if more than 21 years of benefits service are completed.

Average compensation is calculated as the average of all earnings paid by the Township, excluding unused sick and

vacation pay paid at termination, over the final 36 months of employment.

A member's earned or accrued benefit prior to his normal retirement date is equal to the benefit calculated under the normal retirement benefit formula, multiplied by the ratio of his years of benefit service to date to the total years of benefit service he would have worked had he continued employment to his normal retirement date.

Late Retirement Benefit

If a member continues to work beyond his normal retirement date, he will be eligible to receive his accrued pension payable at his late retirement date.

Postretirement Cost-of-Living Increase

Members are eligible to receive an annual cost-of-living adjustment effective each January 1 after retirement, based on the increase in the Consumer Price Index (CPI-U, U.S. City Average) during the 12 months ended the prior September, with the following limitations:

- the total cost-of-living increase cannot exceed the lesser of 30% of the initial pension payable at retirement or the increase in the Consumer Price Index since the member's retirement date,
- the total pension payable may not exceed 75% of the average salary used to determine his retirement benefit, and
- if the increase in the Consumer Price Index for the year is less than 1%, there will be no cost-of-living increase to benefits for that year.
- if the increase in the Consumer Price Index for the year is greater than 3%, the increase in retirement pensions will be limited to 3%.
- no cost-of-living increase will be granted that will impair the actuarial soundness of the Plan.

Disability Benefit

If a member is disabled in the line of duty, he will receive a disability retirement pension equal to 50% of the salary he was receiving at the time of his disablement reduced by any Social Security disability benefits payable due to the same illness or injury.

Death Benefit

The surviving spouse or eligible dependent child of a member who is killed in the line of duty will receive a pension of 100% of the member's monthly salary at the time of his death; however, effective January 1, 2012, this benefit is payable from the Commonwealth general fund and not from the pension plan.

If a member who is vested in his retirement pension or eligible for retirement under the plan dies but is not killed in the line of duty, his surviving spouse or eligible child will receive a pension payable at his normal retirement date equal to 50% of the pension the member would have received had he terminated at the time of his death and survived to his normal retirement date.

If a member dies and is not eligible for a monthly death benefit described above, his designated beneficiary will receive a refund of his accumulated member contributions with interest.

Termination of Employment Benefits

If a member terminates employment prior to retirement eligibility, but after completing 12 or more years of benefit service, he will be eligible for a benefit from the plan equal to his accrued pension at the date of his termination. The benefit will be deferred to his normal retirement date

If a member terminates employment prior to completing 12 or more years of benefit service, he will receive a refund

East Lampeter Township Police Retirement Plan

Actuarial Valuation as of January 1, 2021

of his accumulated member contributions with interest.

Contributions

Member contributions are established at 5% of compensation, but may be reduced or eliminated on an annual basis by resolution. Members currently contribute 5.0% of their compensation. Member contributions are credited with 5% compound interest from the end of the year of deposit.

Service

Vesting service is credited for all continuous years of employment as a full-time police officer with the Township.

Benefit service is credited for all years and completed months of employment as a full-time police officer with the Township.

East Lampeter Township Police Retirement Plan

Actuarial Valuation as of January 1, 2021

Actuarial Assumptions and Methods

The following is a summary of the actuarial assumptions and methods used for this actuarial valuation.

Interest Rate

7.0% per year

The valuation interest rate represents the expected long-term investment return on pension fund assets. This rate is used to discount expected future benefit payments to the valuation date to determine the present value of plan liabilities and to calculate required plan funding levels

Salary Increases

5.5% per year

Inflation

3.0% per year

Mortality

Assumed rates of employee mortality are based on the PUB-2010 table, uniformed employee rates, with mortality projection based on table MP-2019. 25% of active member deaths are assumed to be in the line of duty.

Turnover

The assumed rates of employee turnover are from table T-2 of the *Actuaries Pension Handbook* Sample rates are shown below:

Age	Rate
20	5.4384%
25	5.2917%
30	5.0672%
35	4.6984%
40	3.5035%
45	1.7686%
50	0.4048%
55	0.0000%

Disability

The assumed rates of disablement are from the SOA 1987 Group LTD Table - Males, 6 month elimination. The following is a list of the annual rates of disability at selected ages.

Age	Rate
20	0.0764%
25	0.0854%
30	0.0986%
35	0.1224%
40	0.1760%
45	0.2944%
50	0.5396%
55	0.9770%
60	1.4774%

50% of disabilities are assumed to be in-service disabilities.

Retirement

50% of members are assumed to retire on their normal retirement date, with 50% of those remaining assumed to retire each year thereafter, with 100% of eligible members retiring at age 55. Members eligible and assumed to retire on the valuation date are assumed to retire one year from the valuation date.

Percent Married

100% of employees are assumed to be married. Male spouses are assumed to be the three years older than their female spouses.

Administrative Expenses

An amount is added to the plan's annual normal cost to represent the administrative expenses expected to be paid during the plan year.

Actuarial Value of Assets

The valuation uses an asset smoothing method to even out the year-to-year fluctuations in the investment markets. Under the method being used for this valuation, the investment gains or losses (i.e., actual vs. expected performance) are recognized over a five-year period. The actuarial value of assets determined under this method is limited to 20% above or below the market value of assets.

Funding Method

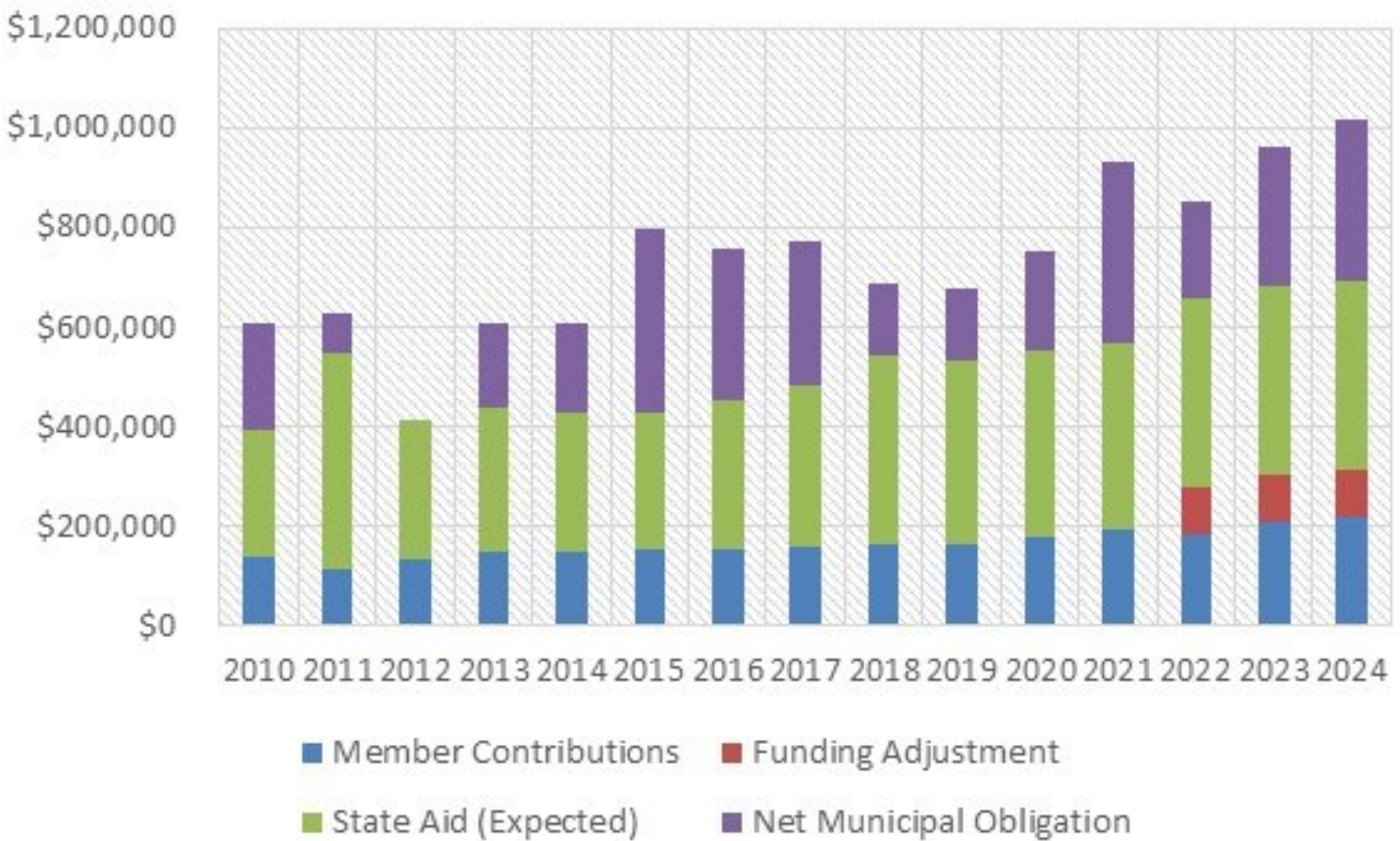
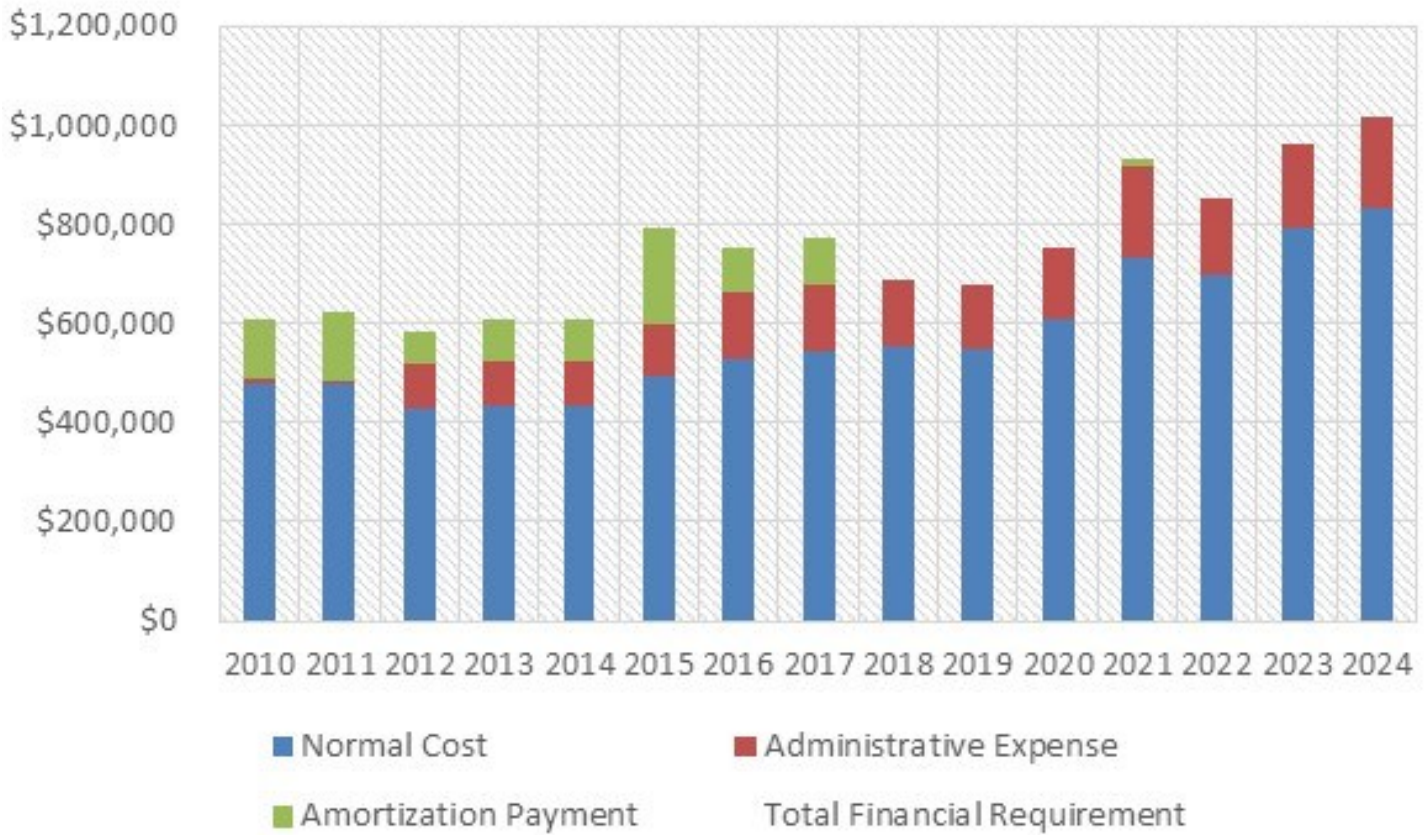
The actuarial cost method is the way that unfunded plan costs are allocated over future years, including the current year. This actuarial valuation uses the *Entry Age Normal Actuarial Cost Method*, as required under Act 205 of 1984. Under this method, the normal cost and actuarial accrued liability are determined on an individual basis. The unfunded actuarial accrued liability is determined as the excess of the actuarial accrued liability over the actuarial value of assets. If the actuarial accrued liability exceeds the actuarial value of plan assets, the unfunded actuarial accrued liability is amortized over future years as part of the annual contribution requirement. The amortization amounts are determined based on the source of each piece of the unfunded actuarial accrued liability (e.g., actuarial gains and losses, plan amendments, changes in assumptions, etc.). If the actuarial value of assets exceeds the actuarial accrued liability, 10% of this excess is used to reduce the plan's financial requirement.

Changes in the Plan's Actuarial Assumptions

None.

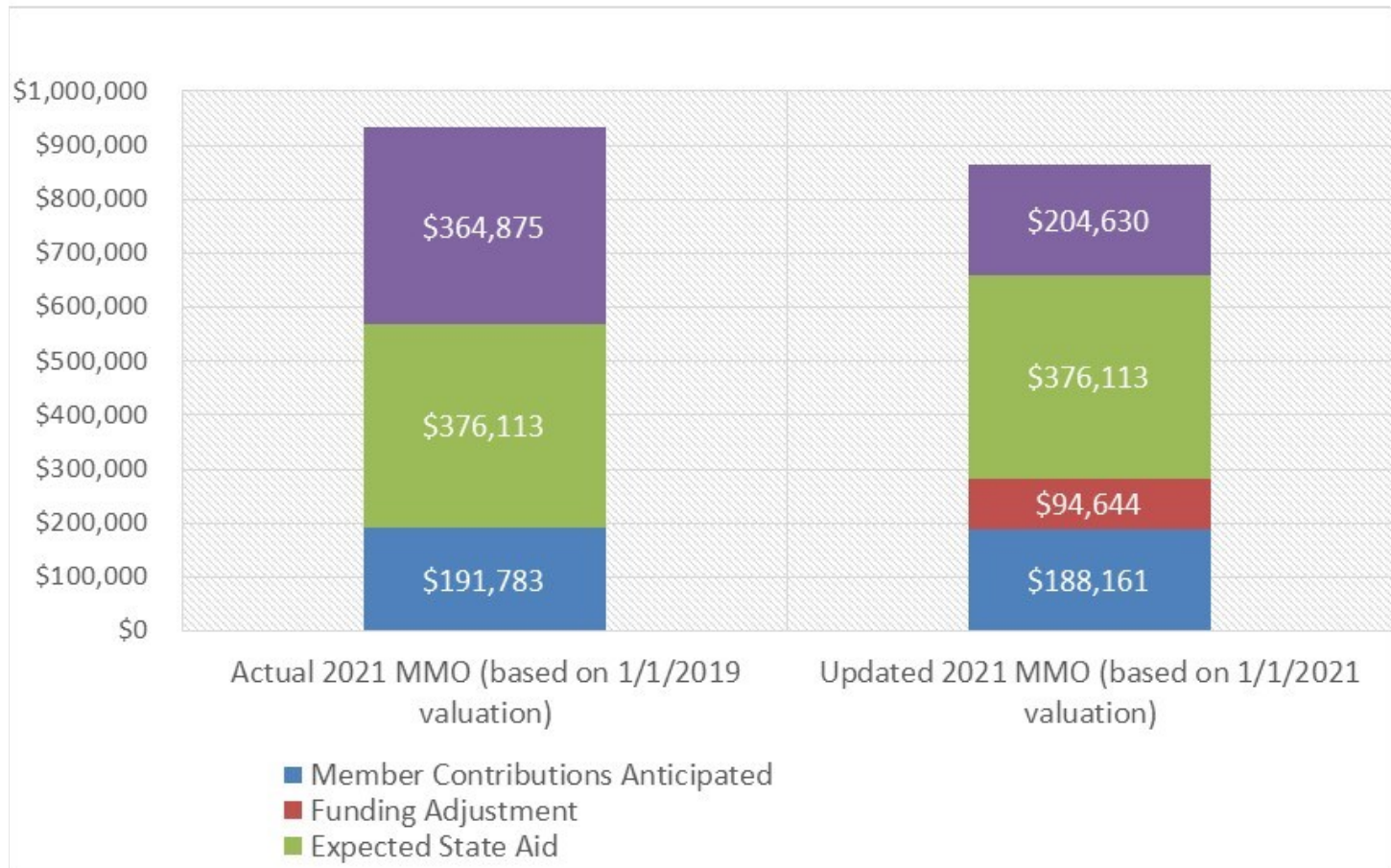
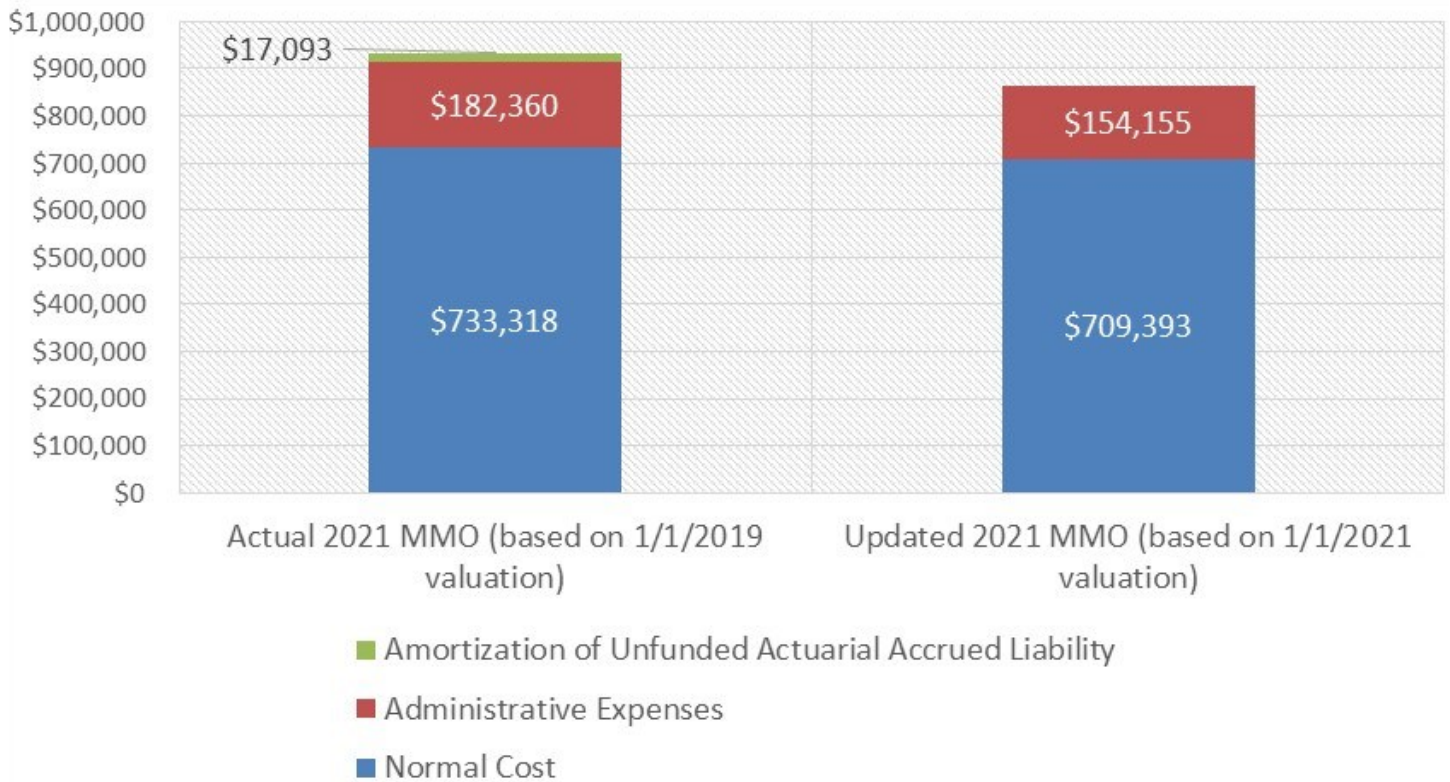
East Lampeter Township Police Retirement Plan

Actuarial Valuation as of January 1, 2021



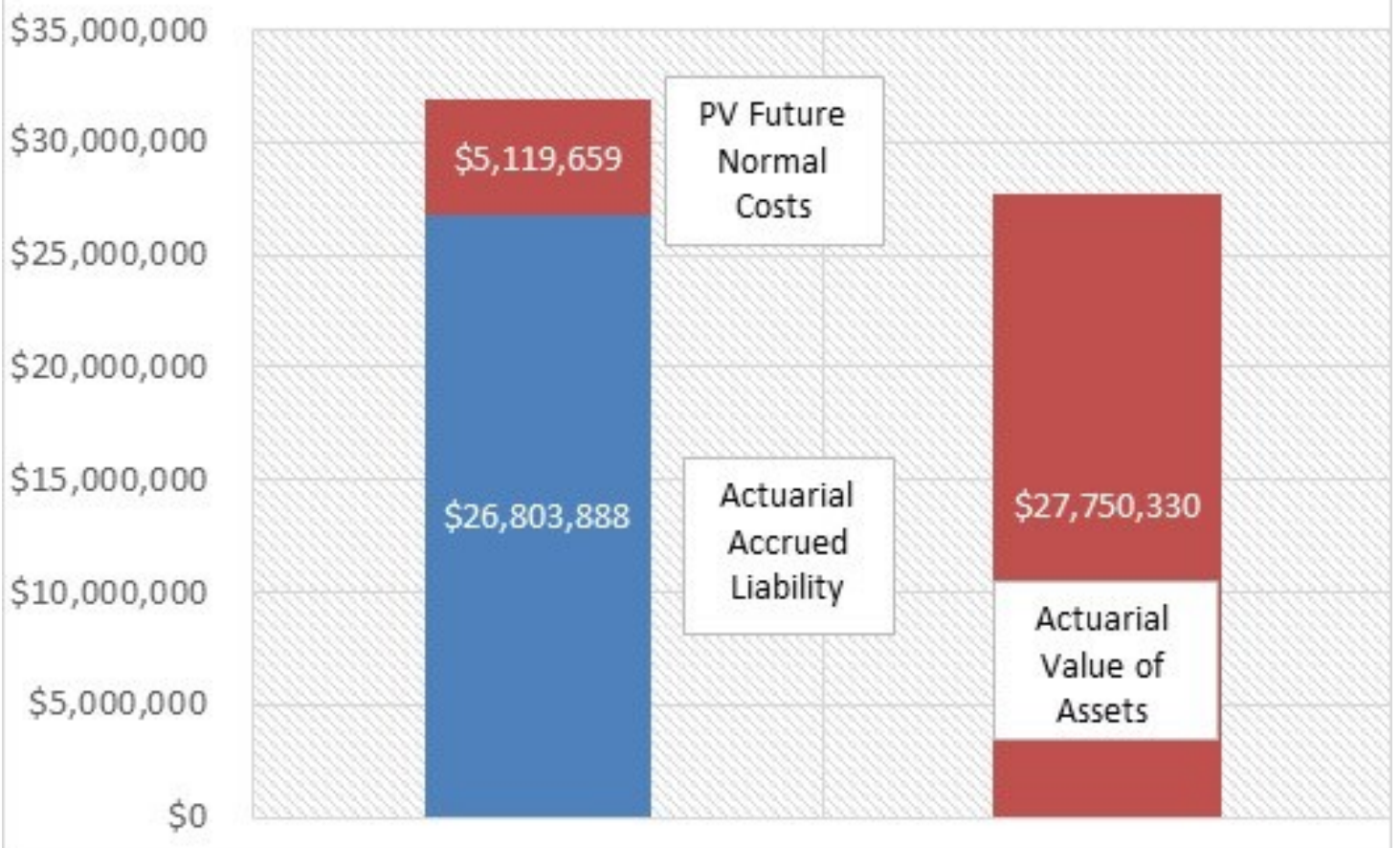
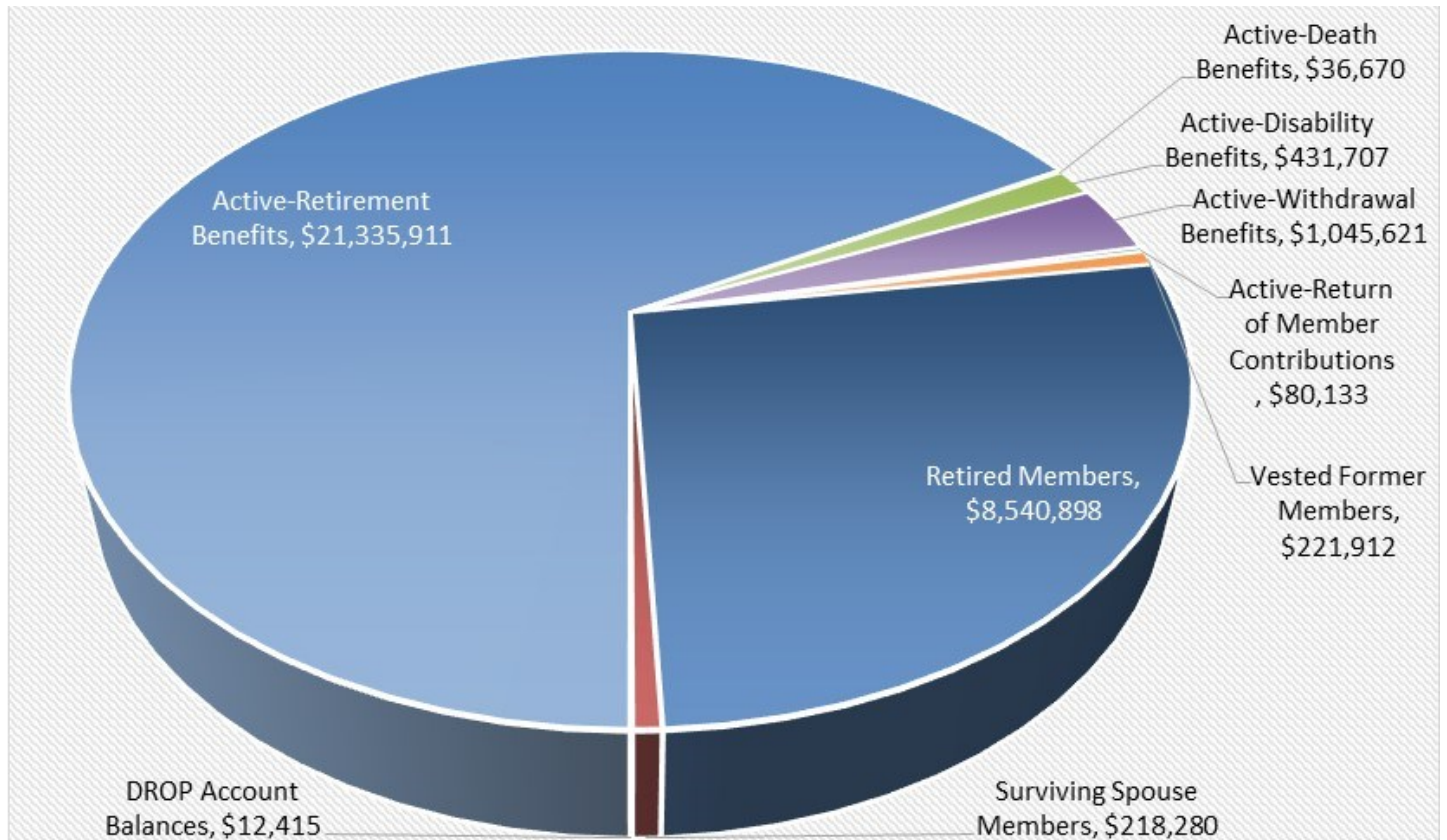
East Lampeter Township Police Retirement Plan

Actuarial Valuation as of January 1, 2021



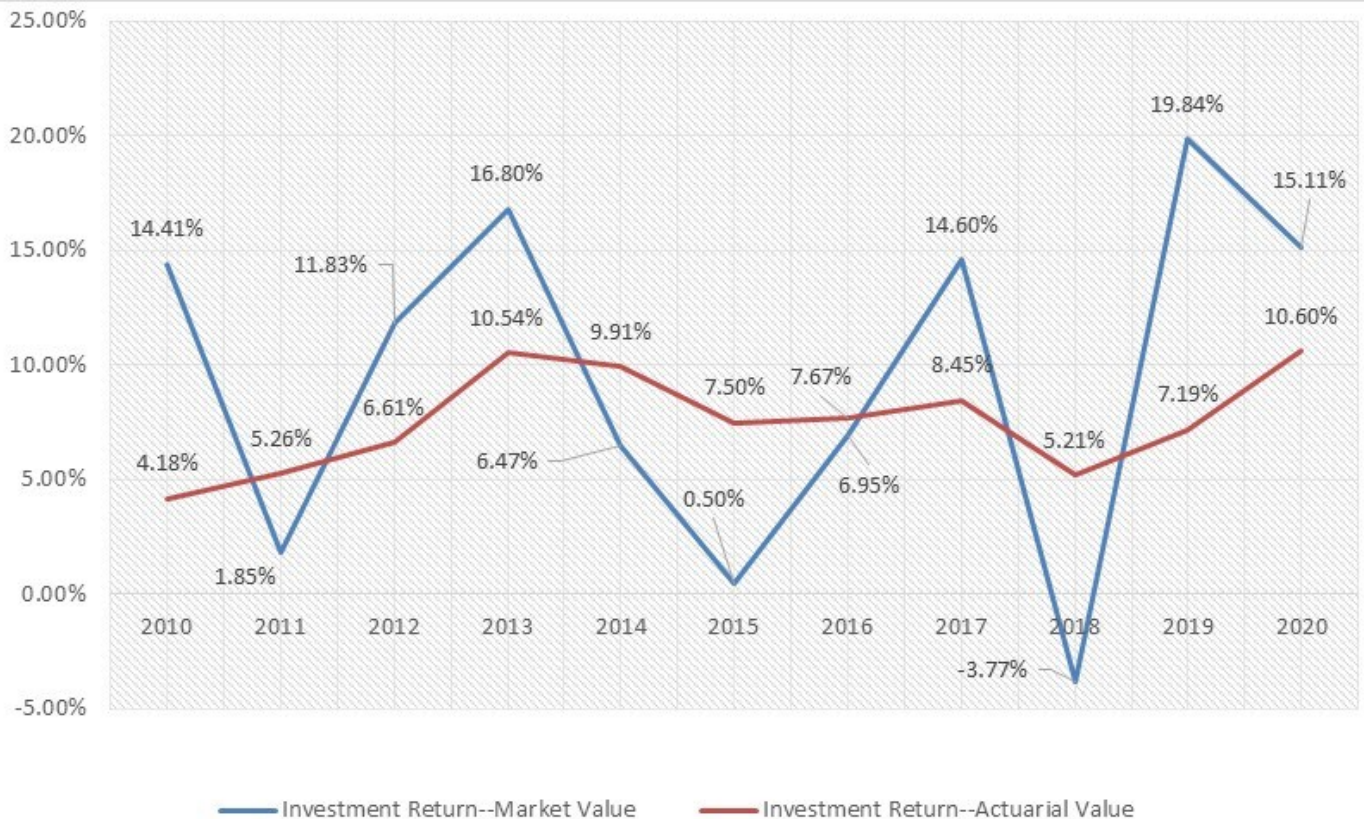
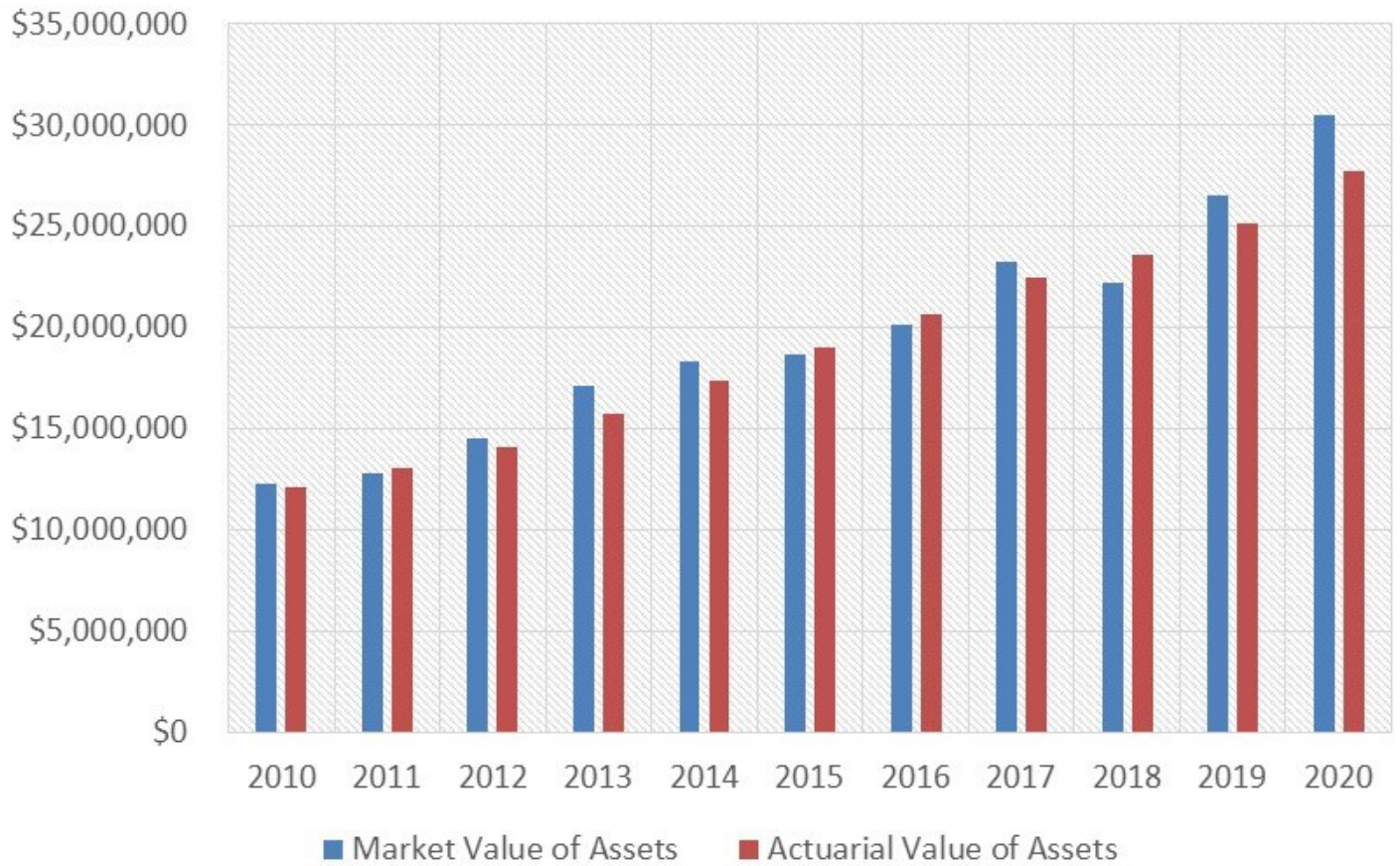
East Lampeter Township Police Retirement Plan

Actuarial Valuation as of January 1, 2021



East Lampeter Township Police Retirement Plan

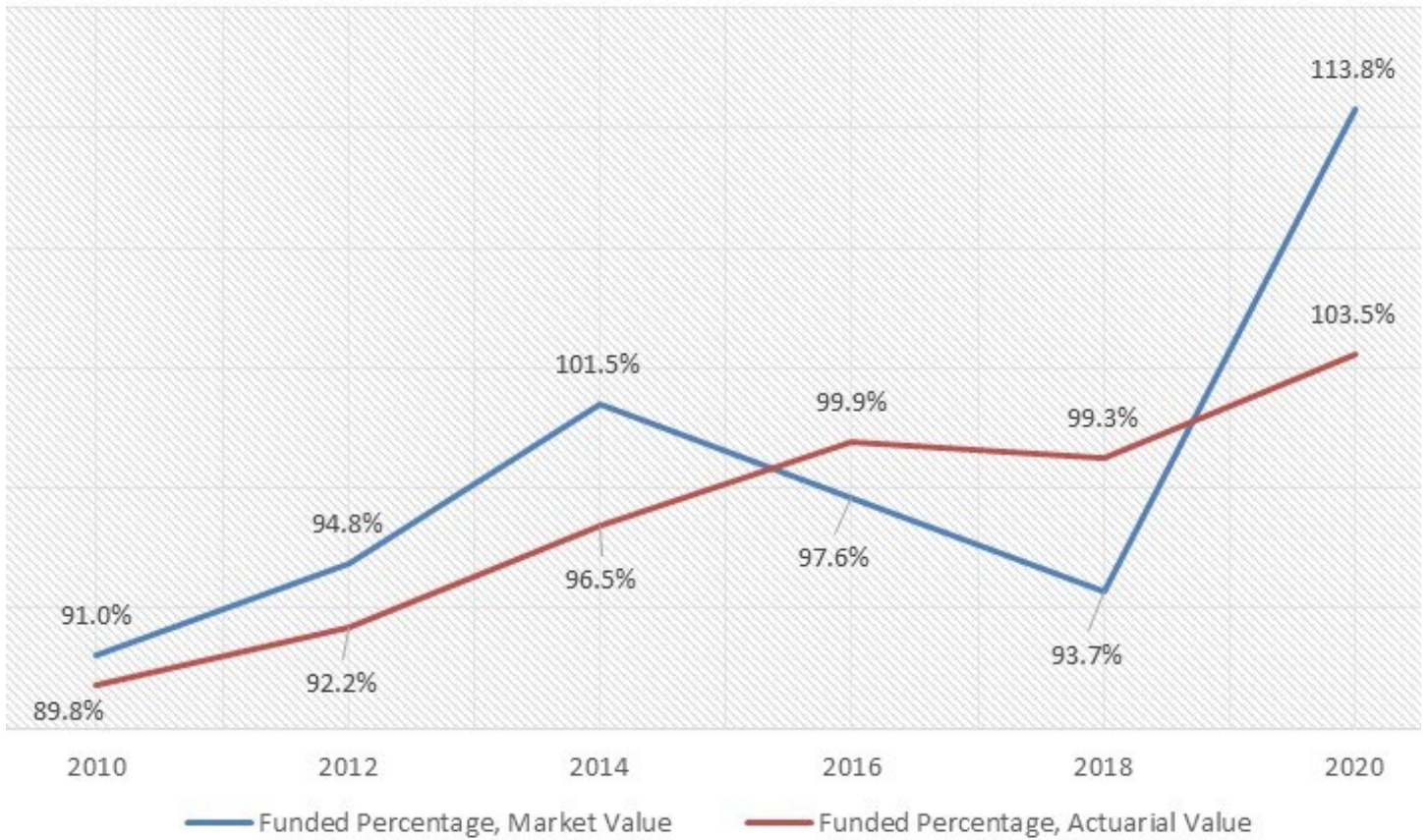
Actuarial Valuation as of January 1, 2021



East Lampeter Township Police Retirement Plan

Actuarial Valuation as of January 1, 2021

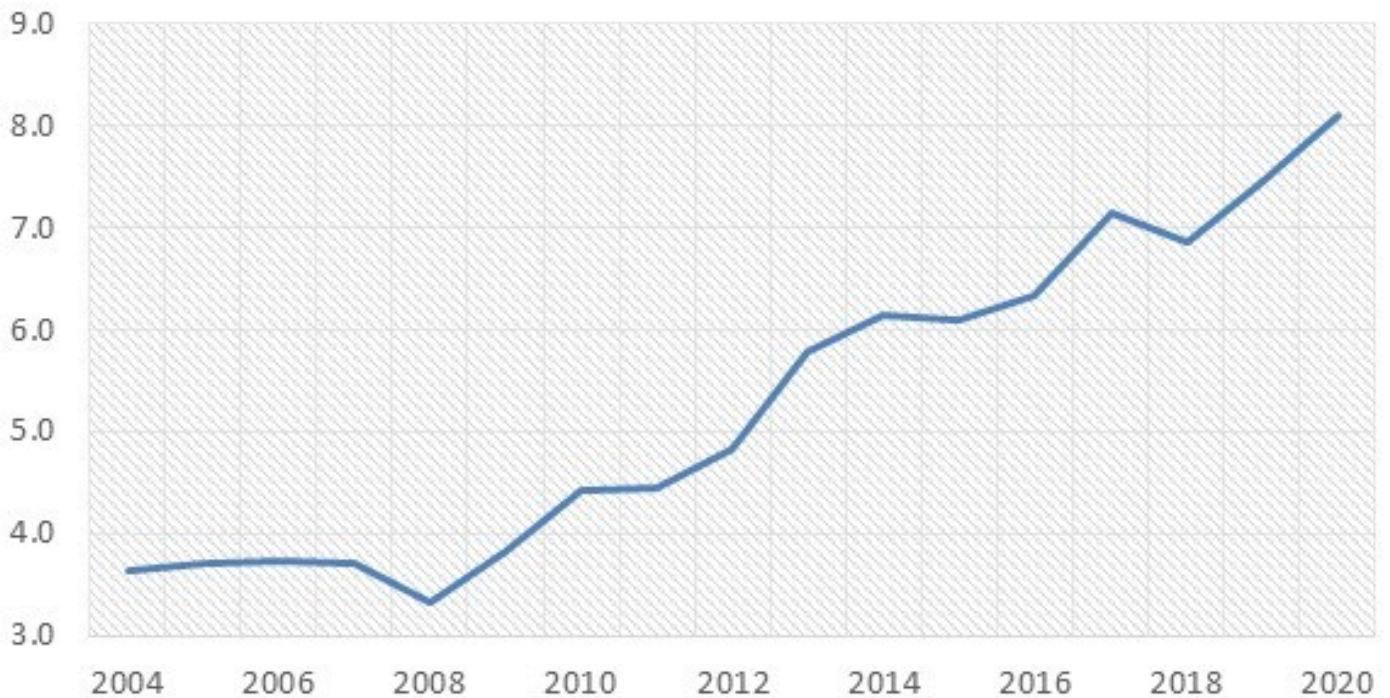
Funded Percentage



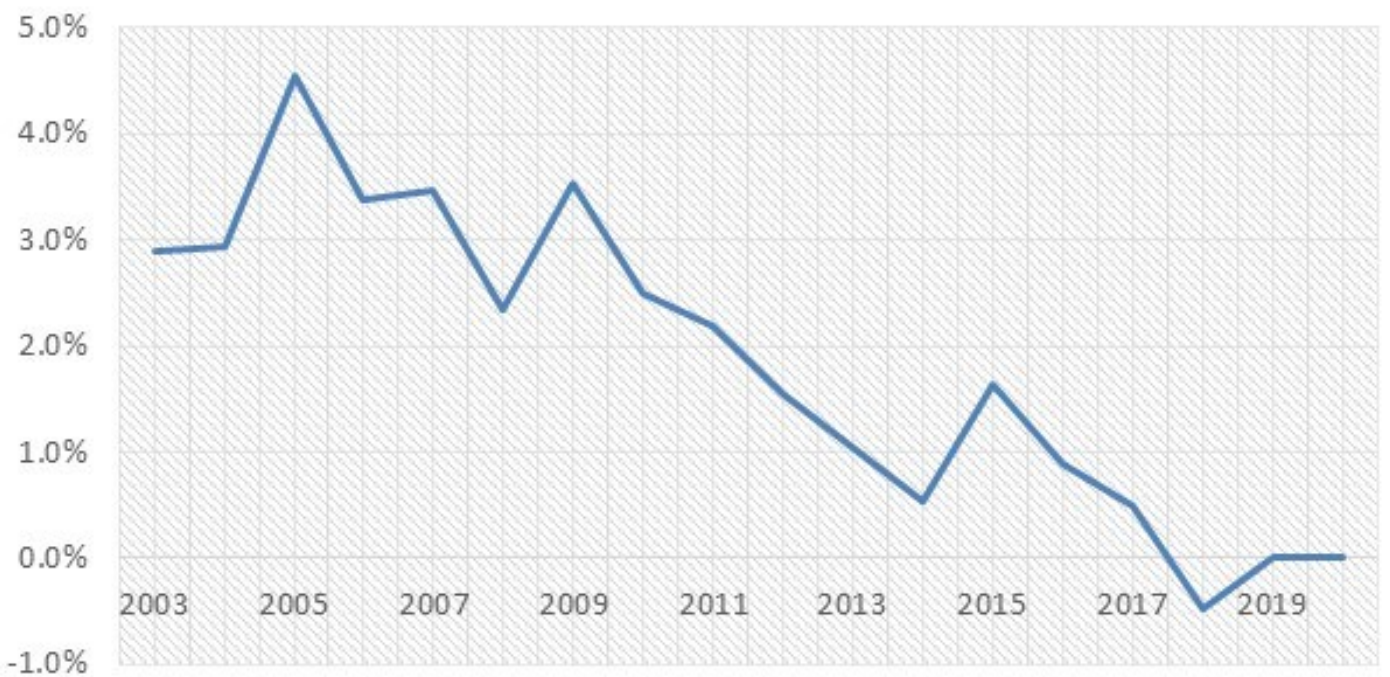
East Lampeter Township Police Retirement Plan

Actuarial Valuation as of January 1, 2021

Market Value of Assets/Payroll



Cash Flow/Assets_{BOY}, Police



East Lampeter Township Police Retirement Plan
Active Members as of January 1, 2021

Name	Sex	Dates			Service				Current Pay	Accrued	Monthly	Accumulated Member	
		Birth	Hire	Retirement	Past Vesting	Past Benefit	Future Benefit	Total Benefit		Monthly Pension	Pension at Ret.	w/o int.	w/ int.
Auerbeck, Tyler A.	M	6/25/1993	3/18/2019	7/1/2048	1.7896	1.7500	27.5000	29.2500	\$82,322	\$167	\$3,430	\$6,711.92	\$6,841.71
Berry, Shawn R.	M	2/3/1971	7/9/2001	8/1/2026	19.4809	19.4167	5.5833	25.0000	97,684	2,996	4,070	54,657.91	77,485.34
Cloonan, Brian T.	M	8/28/1970	9/14/1998	10/1/2023	22.2978	22.2500	2.7500	25.0000	136,407	4,920	5,684	78,990.93	113,494.60
Dolk, Gregory R.	M	1/23/1974	1/20/1998	2/1/2024	22.9481	22.9167	3.0833	26.0000	117,136	4,160	4,901	66,045.25	97,078.45
Dusellier, Emily N.	F	9/20/1994	5/6/2019	10/1/2049	1.6557	1.5833	28.7500	30.3333	74,014	161	3,084	5,578.27	5,672.15
Eachus II, Sidney R.	M	9/11/1968	1/4/1994	1/1/2021	26.9918	26.9167	0.0000	26.9167	124,436	4,852	4,852	76,602.97	120,498.58
Eelman, Scott J.	M	4/24/1971	9/11/1995	5/1/2021	25.3060	25.2500	0.3333	25.5833	108,831	4,137	4,392	66,457.45	102,826.74
Fazekas, Stephen L.	M	10/20/1973	1/20/2003	2/1/2028	17.9481	17.9167	7.0833	25.0000	96,420	2,758	4,017	53,839.63	74,792.35
Fletcher, Anthony S.	M	12/5/1976	7/6/2004	8/1/2029	16.4891	16.4167	8.5833	25.0000	109,978	2,806	4,582	55,308.40	74,324.72
Garman, Andrew C.	M	2/15/1980	5/19/2006	6/1/2031	14.6202	14.5833	10.4167	25.0000	105,315	2,315	4,388	48,502.92	63,799.90
Gehr, Lisa A.	F	1/7/1969	1/20/1997	2/1/2022	23.9481	23.9167	1.0833	25.0000	96,698	3,649	4,029	59,907.10	91,444.70
Gentzler, Preston K.	M	9/28/1977	6/10/2002	10/1/2027	18.5601	18.5000	6.7500	25.2500	109,234	3,152	4,551	59,873.39	84,408.56
Goss, Sam M.	M	3/6/1978	7/9/2001	4/1/2028	19.4809	19.4167	7.2500	26.6667	96,227	2,814	4,049	56,119.16	79,830.56
Heistand, Ryan	M	11/15/1990	4/25/2016	5/1/2041	4.6858	4.6667	20.3333	25.0000	97,751	700	4,073	19,035.90	20,658.29
Hess, Matthew E.	M	5/8/1977	7/5/2005	8/1/2030	15.4918	15.4167	9.5833	25.0000	118,899	2,861	4,954	54,364.59	71,679.47
Immel, Douglas M.	M	1/28/1977	6/12/2006	7/1/2031	14.5546	14.5000	10.5000	25.0000	96,296	2,224	4,012	47,844.83	62,998.55
Jaquith, Douglas L.	M	7/22/1969	1/18/1994	1/1/2021	26.9536	26.9167	0.0000	26.9167	105,341	4,378	4,378	68,360.40	108,653.51
Jones, Christopher D.	M	8/6/1978	9/24/2001	9/1/2028	19.2705	19.2500	7.6667	26.9167	109,306	3,177	4,594	62,785.81	87,793.98
Kondras, Bryan S.	M	7/1/1969	9/15/1997	10/1/2022	23.2951	23.2500	1.7500	25.0000	120,646	4,602	5,027	69,340.78	102,094.57
Manley, Mark E.	M	10/25/1977	1/22/2002	11/1/2027	18.9426	18.9167	6.8333	25.7500	102,125	2,919	4,255	56,557.93	79,405.57
Mauro, Olivia N.	F	1/22/1997	3/22/2020	2/1/2052	0.7787	0.7500	31.0833	31.8333	48,920	48	2,038	2,446.00	2,446.00
Miller, Jordan W.	M	4/6/1978	7/5/2005	8/1/2030	15.4918	15.4167	9.5833	25.0000	102,701	2,590	4,279	53,305.92	71,036.88
Misiura, Josiah D.	M	1/26/1992	3/27/2017	4/1/2042	3.7650	3.7500	21.2500	25.0000	31,209	321	1,300	9,713.92	10,505.81
Neff, Michael R.	M	7/25/1973	5/19/1997	8/1/2023	23.6202	23.5833	2.5833	26.1667	121,249	4,342	5,072	73,501.82	109,935.28
Nikolaus, Jeffrey S.	M	4/21/1974	9/14/1998	5/1/2024	22.2978	22.2500	3.3333	25.5833	112,145	3,988	4,693	66,816.81	97,825.34
Redden, Michael D.	M	7/27/1968	5/17/1999	6/1/2024	21.6257	21.5833	3.4167	25.0000	105,774	3,665	4,407	61,826.57	89,445.00
Reimers, Joshua G.	M	7/11/1984	6/4/2018	7/1/2043	2.5765	2.5000	22.5000	25.0000	90,831	361	3,785	10,660.37	11,070.68
Sanger, Samuel A.	M	8/22/1977	1/20/2003	2/1/2028	17.9481	17.9167	7.0833	25.0000	110,834	3,292	4,618	61,126.77	83,481.80
Shank, James D.	M	11/19/1967	9/6/1994	1/1/2021	26.3197	26.2500	0.0000	26.2500	122,108	4,859	4,859	72,310.32	112,366.03
Shrom, Randy S.	M	1/24/1979	7/6/2004	8/1/2029	16.4891	16.4167	8.5833	25.0000	117,702	3,062	4,904	58,228.43	77,686.82
Snader, Chad	M	9/6/1991	4/10/2016	10/1/2041	4.7268	4.6667	20.7500	25.4167	93,322	637	3,888	17,767.78	19,298.77
Wahlberg, Blake E.	M	2/3/1997	3/18/2019	3/1/2052	1.7896	1.7500	31.1667	32.9167	75,876	137	3,162	6,181.97	6,301.38
Waltman, Heather L.	F	6/23/1982	7/5/2006	7/1/2032	14.4918	14.4167	11.5000	25.9167	101,640	2,172	4,255	50,562.06	66,404.04
Werner, Jonathan L.	M	9/19/1970	9/14/1998	10/1/2023	22.2978	22.2500	2.7500	25.0000	102,003	3,713	4,250	63,051.29	93,068.40
Westerman, Nathan L.	M	5/12/1970	2/27/1995	1/1/2021	25.8443	25.8333	0.0000	25.8333	104,067	4,177	4,177	65,709.67	102,836.93
Wiegand, Ryan M.	M	6/13/1994	6/18/2017	7/1/2044	3.5383	3.5000	23.5000	27.0000	89,535	440	3,731	13,754.62	14,575.82
Zerbe, Stephen B.	M	11/26/1968	9/9/1991	1/1/2021	29.3115	29.2500	0.0000	29.2500	128,233	5,136	5,136	79,474.70	127,593.77
Totals									\$3,763,215	\$102,688	\$155,876	\$1,833,324.56	\$2,621,661.05

East Lampeter Township Police Retirement Plan
Vested Former Members as of January 1, 2021

Name	Sex	Age	Retirement	Dates				Monthly Pension	Pension Form
			Age	Birth	Hire	Termination	Retirement		
Wildt, III, Charles H.	M	48	50	5/11/1973	5/19/1997	6/1/2010	6/1/2023	\$1,349.53	J & 50% Surv.
Totals								\$1,349.53	

East Lampeter Township Police Retirement Plan
Retired Members as of January 1, 2021

Name	Sex	Ret. Type	Age	Dates				Monthly Pension	Pension Form
				Birth	Hire	Retirement	Spouse Birth		
Bezzard, Ronald S.	M		55	11/8/1965	5/20/1991	6/1/2016	4/24/1959	\$3,684.93	J & 50% Surv.
Bougher, Renee L.	F		62	8/13/1958	12/31/1981	9/1/2008	6/16/1961	2,670.88	J & 50% Surv.
Bowman, John M.	M		55	10/14/1965	6/28/1989	4/1/2018	3/14/1969	4,990.11	J & 50% Surv.
Brinkman, Richard L.	M		79	3/16/1942	6/27/1982	7/1/2002		1,217.36	Life
Crouse, Kenneth A.	M		68	4/20/1953	1/20/1986	11/1/2011	10/18/1953	3,436.83	J & 50% Surv.
Edgell, Joseph W.	M	D	55	6/30/1966		4/1/2020	4/22/1964	4,108.07	J & 50% Surv.
Ely, James R.	M		64	11/21/1956		1/1/2016	1/17/1965	4,645.35	J & 50% Surv.
Flory, Clarence L.	M		82	6/26/1939	2/1/1976	1/1/1999	7/15/1939	2,656.69	J & 50% Surv.
Hamill, Kenneth A.	M		72	10/19/1948	1/0/1900	9/1/1990		1,487.10	Life
Heffner, William A.	M		69	11/15/1951		9/14/2007	11/29/1952	1,738.16	J & 50% Surv.
Jerchau, Dale E.	M		70	7/21/1950		2/1/2006	5/4/1952	4,094.47	J & 50% Surv.
Lawrence, Michael D.	M		76	11/16/1944		1/1/1997	8/24/1951	2,498.59	J & 50% Surv.
Leighty, Marlene F.	F		59	6/11/1962	11/5/1984	8/1/2013	6/9/1959	3,750.48	J & 50% Surv.
Lutz, John R.	M		68	10/9/1952		10/9/2002		1,867.45	Life
Mcelheny, Sr., James D.	M		60	6/2/1961		7/1/2017	4/12/1953	4,337.23	J & 50% Surv.
Reed, Robert S.	M		62	5/26/1959		6/1/2009	5/26/1959	963.49	J & 50% Surv.
Savage, Ronald W.	M		77	4/9/1944		5/3/1994	12/10/1949	2,478.84	J & 50% Surv.
Velez, Michelle R.	F		55	5/6/1966		6/1/2016	5/6/1966	2,561.04	J & 50% Surv.
Weaver, Robin R.	M		66	2/2/1955		6/1/2017	2/9/1969	4,551.38	J & 50% Surv.
Glick, Marguerite E.	F	S	85	6/30/1936		4/1/1995		1,598.37	Life
Orr-Sensenig, Audrey*	M	S	57	11/24/1963		5/1/2013		1,606.32	Life
Total								\$60,943.14	

* Benefit partially funded by annuity.