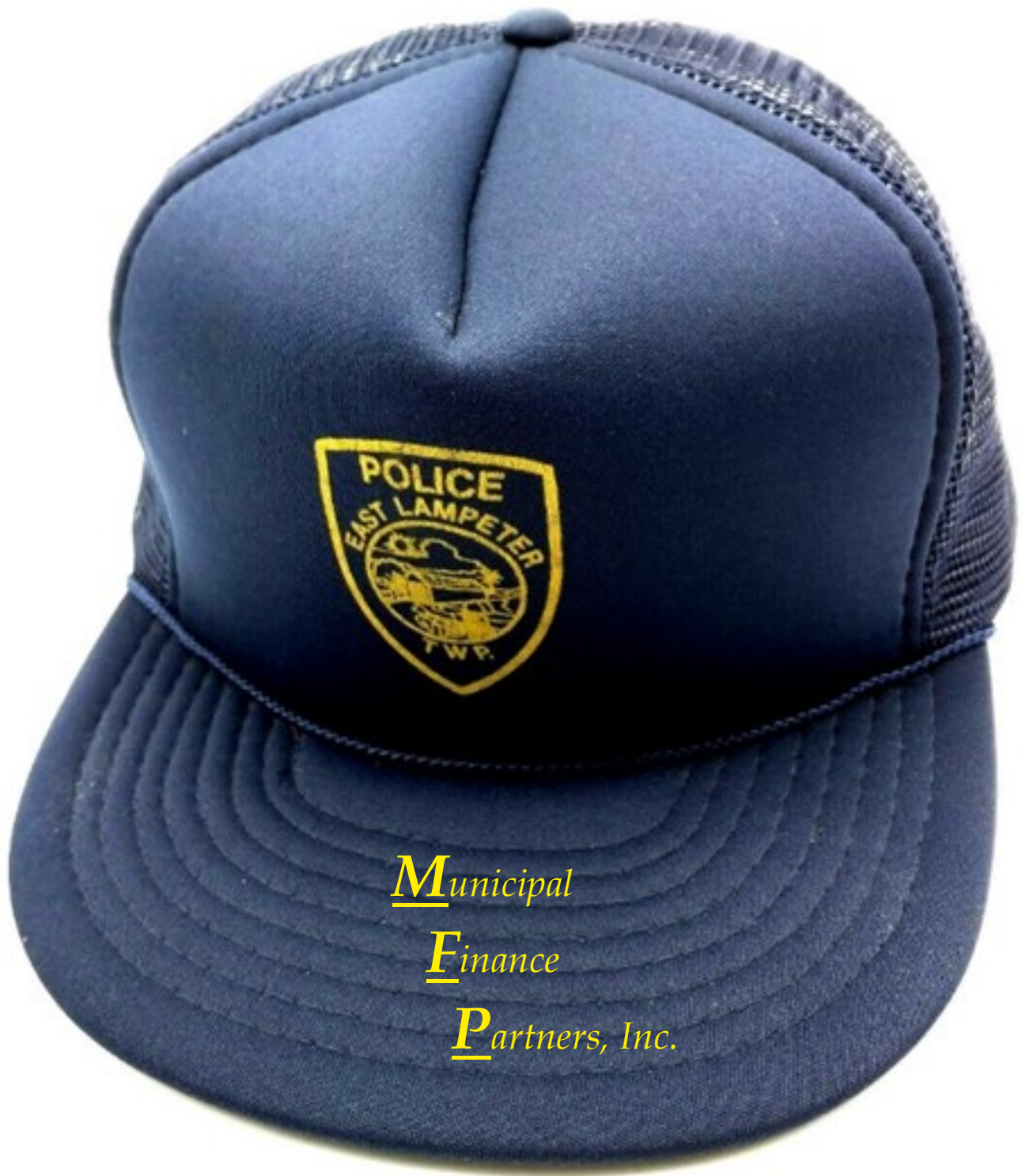


# East Lampeter Township Police Retirement Plan

Actuarial Valuation as of January 1, 2019



M*unicipal*

F*inance*

P*artners, Inc.*

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# East Lampeter Township Police Retirement Plan

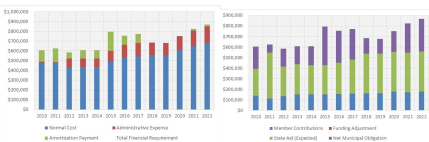
## Actuarial Valuation as of January 1, 2019

### 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 2020, plus projected MMOs for 2021 and 2022, based upon this actuarial valuation and how the MMO is funded.

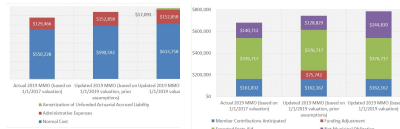


(Click on chart for larger version)

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 2019 was determined in 2018, based on the January 1, 2017 actuarial valuation and estimated 2018 compensation. These charts show what the 2019 MMO would have been based on the January 1, 2019 actuarial valuation and actual 2018 compensation compared to the actual 2019 MMO, including the impact of a change in actuarial assumptions.



#### MMO Components:

- **Normal Cost: 18.9%** of active member compensation
- **Administrative Expenses: 4.7%** of active member compensation
- An **Amortization Payment of \$17,093**
- **Member Contributions of 5.0%** of active member compensation reduce the MMO

The impact of the January 1, 2019 actuarial valuation on the MMO is as follows:

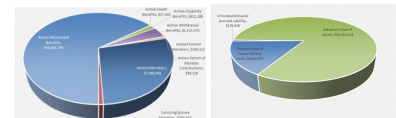
- The Normal Cost has increased from 17.0% to 18.9% of compensation.
- Administrative expenses have increased from 4.0% to 4.7% of compensation.

- The amortization payment has increased from a *negative* \$433 to \$17,093 due a change in actuarial assumptions, offset by experience gains.

The actuarial gains are the net of:

- Experience gains of \$801,994,
- Investment losses of \$80,560, and
- A funding deviation of \$62,985 as plan contributions were greater than expected. Funding deviations are generally caused by the timing of the plan's MMOs; for example, the 2017 contributions were based on the January 1, 2015 actuarial valuation.

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

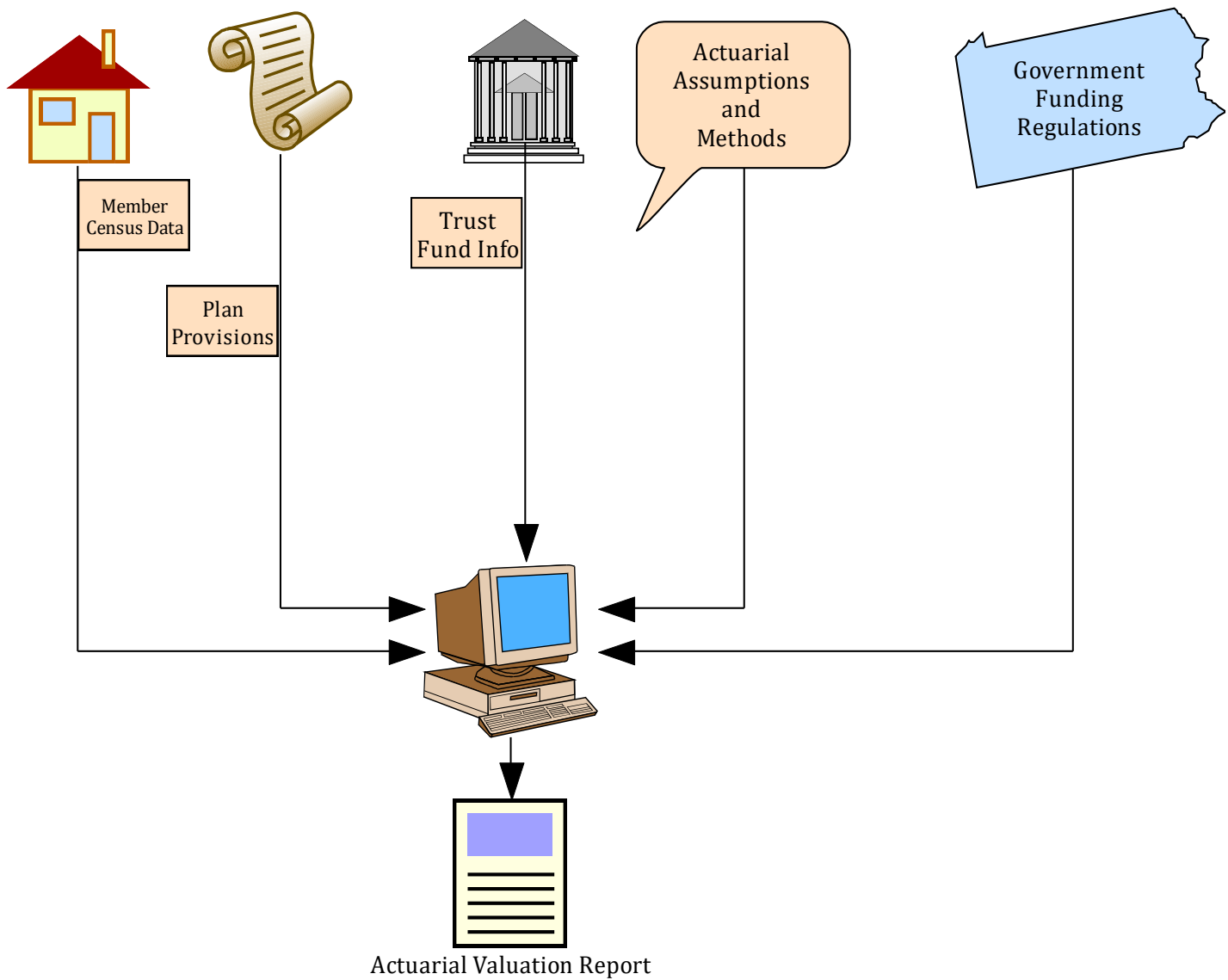


The actuarial valuation is based upon the following inputs:

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

# East Lampeter Township Police Retirement Plan

*Actuarial Valuation as of January 1, 2019*



The remainder of this report details how these inputs impact the plan's funding requirements. The detailed MMO calculations for 2017 and 2018 are found on [page 14](#). The determination of the MMO components for future years is shown on [pages 7-11](#).

## 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 2017 and 2018.

The market value of plan assets has grown from \$20,179,051 at December 31, 2016 to \$22,245,307 at December 31, 2018. The

fund earned returns of 14.60% in 2017 and -3.77% in 2018.

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 \$23,513,314 as of January 1, 2019.

On an actuarial basis, the fund earned 8.45% in



# East Lampeter Township Police Retirement Plan

## Actuarial Valuation as of January 1, 2019

2017 and 5.21% in 2018, compared to the actuarially assumed rate of 7.0%.

The lower than expected returns caused an investment loss of \$80,560 (about 0.3% of plan assets) during 2017 and 2018.

[Page 12](#) of this report contains detailed information regarding the pension fund activity. [Page 13](#) shows how the fund was invested at the end of 2017 and 2018.

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 2017 and 2018, 4 new officers joined the plan, 2 officers terminated

employment and received a refund of their contributions and 3 officers retired, decreasing the active membership from 35 to 34 officers. In addition, 1 retired officer died, leaving a survivor pension payable to his spouse. As of January 1, 2019 the plan membership consisted of 34 active officers, 1 vested former member, 18 retired officers and 2 spouse beneficiary receiving a pension.

Since the prior actuarial valuation, the plan had an experience gain of \$801,994 (3.4% of liabilities). This was due mostly to salary increases that were less than expected and the retired member death.

[Page 15](#) contains detailed information regarding changes in plan membership during 2017 and 2018. 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 expected 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.

# East Lampeter Township Police Retirement Plan

## Actuarial Valuation as of January 1, 2019

The detailed calculation of the actuarial value of assets is shown on [page 11](#).

For this valuation, the mortality table was updated from the RP-2000 table to the PUB-2010 table for uniformed employees, with future mortality increases projected using Table MP-2019.

There have been no other changes in the plan's actuarial assumptions or methods.

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 16-17](#) 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 decreased slightly from 99.9% to 99.3% as of January 1, 2019, due to the offsetting impact of the actuarial gains and the change in actuarial assumptions. On a market value basis, the

funding percentage was 93.7%. 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 deviations 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 liabil-

# East Lampeter Township Police Retirement Plan

*Actuarial Valuation as of January 1, 2019*

bilities 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 defeated 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.

- **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 use

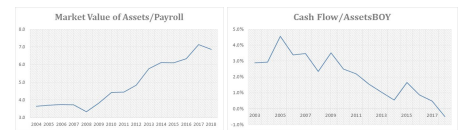
to predict it. This risk can be mitigated by updating mortality assumptions as new tables are released, reviewing the impact of deviations from expectations and changing assumptions when these reviews and/or experience studies indicate.

- **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, 2019. 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 2021 and may be used for calculating the MMO for 2022.

The report also summarizes the pension fund and participant activity during 2017 and 2018.

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

# East Lampeter Township Police Retirement Plan

## Actuarial Valuation as of January 1, 2019

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.

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 Janu-

ary 1, 2019 actuarial valuation were as of January 1, 2019.

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 Partners, 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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Harrisburg, PA 17109  
(717) 909-8400, x5015  
[cfriedlander@mfvinc.biz](mailto:cfriedlander@mfvinc.biz)



Charles B. Friedlander, F.S.A.  
President & Chief Actuary  
Enrolled Actuary No. 20-04194

March 30, 2020

Date



# East Lampeter Township Police Retirement Plan

*Actuarial Valuation as of January 1, 2019*

## ***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)	\$613,758
Normal Cost (% of Payroll)	18.9%

### Present Value of Future Benefits

Active Members		
Retirement Benefits	\$18,434,296	
Death Benefits	37,541	
Disability Benefits	411,188	
Withdrawal Benefits	1,115,473	
Return of Member Contributions	38,118	
Total Active Members		\$20,036,616
Vested Former Members		198,321
Retired Members		7,968,450
Disabled Members		0
Surviving Spouse Members		233,822
Total Present Value of Future Benefits		\$28,437,209
Present Value of Future Normal Costs		(4,696,957)
Actuarial Accrued Liability		\$23,740,252
Actuarial Value of Assets		(23,563,314)
Unfunded Actuarial Accrued Liability		\$176,938

# East Lampeter Township Police Retirement Plan

*Actuarial Valuation as of January 1, 2019*

*Changes in the unfunded actuarial accrued liability are amortized over future years based on the source of the change and the average future service of active plan members, as mandated by Act 205 of 1984.*

## Amortization of Unfunded Actuarial Accrued Liability

Initial Period	Date Established	Initial Amount	Current Amount	Annual Payment	Years Remaining	Source
17	1/1/2003	\$117,402	\$11,279	\$11,279	1	Actuarial Assump. Change
15	1/1/2005	(1,042,564)	(107,528)	(107,528)	1	Actuarial Gain
17	1/1/2005	379,376	102,468	36,491	3	Active Benefit Increase
17	1/1/2005	573,351	154,860	55,149	3	Actuarial Assump. Change
15	1/1/2007	721,560	208,597	74,286	3	Actuarial Loss
15	1/1/2009	(1,237,604)	(558,040)	(127,197)	5	Actuarial Assump. Change
15	1/1/2009	(45,278)	(20,416)	(4,654)	5	Active Benefit Modification
15	1/1/2009	1,573,894	709,674	161,760	5	Actuarial Loss
15	1/1/2011	(1,113,392)	(658,811)	(114,247)	7	Actuarial Assump. Change
15	1/1/2011	106,660	63,112	10,945	7	Actuarial Loss
15	1/1/2013	438,793	313,885	45,025	9	Actuarial Assump. Change
15	1/1/2013	646,750	462,645	66,364	9	Actuarial Loss
10	1/1/2015	(300,185)	(203,720)	(39,944)	6	Actuarial Gain
10	1/1/2017	(530,479)	(451,002)	(70,587)	8	Actuarial Gain
10	1/1/2019	934,354	934,354	124,328	10	Actuarial Assump. Change
10	1/1/2019	(784,419)	(784,419)	(104,377)	10	Actuarial Gain
Totals		<u>\$438,219</u>	<u>\$176,938</u>	<u>\$17,093</u>		

## Aggregation of Changes in Unfunded Actuarial Accrued Liability

Target Date	Date of Aggregation	Outstanding Balance	Annual Payment	Years Remaining	
N/A	1/1/2017	\$27,003	(\$2,858)	N/A	Prior Years
2028	1/1/2019	149,935	19,951	10	New Bases
	1/1/2019	<u>\$176,938</u>	<u>\$17,093</u>	17	

# East Lampeter Township Police Retirement Plan

## Actuarial Valuation as of January 1, 2019

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

Unfunded Actuarial Accrued Liability at 1/1/2017		\$20,479
Normal Cost	1,073,980	
Administrative Expense	305,716	
Interest on Above Items	139,499	
Total		1,519,195
Employer Contributions	(700,535)	
Member Contributions	(332,172)	
General Municipal Pension System State Aid	(435,622)	
Interest on Contributions	(107,327)	
Total		(1,575,656)
Adjustment for Funding Deviation		62,985
Modification to Actuarial Assumptions		934,354
Modification to Active Member Benefits		0
Modification to Retired Member Benefits		0
Actuarial (Gain) or Loss		
Investment (Gain) or Loss	\$80,560	
Experience (Gain) or Loss	(801,994)	
Adjustment for Funding Deviation	(62,985)	
Total		(784,419)
Unfunded Actuarial Accrued Liability at 1/1/2019		\$176,938

# East Lampeter Township Police Retirement Plan

## Actuarial Valuation as of January 1, 2019

*The Plan's 2019 Minimum Municipal Obligation (MMO) was calculated based on the January 1, 2017 actuarial valuation and 2018 pay as estimated in the fall of 2018. This illustration, based on the January 1, 2019 actuarial valuation and actual 2018 pay, shows how the valuation results impact the calculation of the MMO.*

### Illustrated Minimum Municipal Obligation

Normal Cost	\$613,758
Administrative Expenses <sup>1</sup>	152,858
Amortization of Unfunded Actuarial Accrued Liability	17,093
Total Financial Requirement	<u>\$783,709</u>
Member Contributions Anticipated	\$162,162
Funding Adjustment	0
Expected State Aid	376,717
Net Municipal Obligation	<u>244,830</u>
Total Financial Requirement	<u>\$783,709</u>

<sup>1</sup> Average of administrative expenses over two prior years:  
2017: \$143,894, 2018: \$161,822



# East Lampeter Township Police Retirement Plan

*Actuarial Valuation as of January 1, 2019*

*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.*

	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Market Value at January 1	\$18,314,262	\$18,708,997	\$20,179,051	\$23,230,274
Contributions	799,383	762,205	780,918	687,412
Benefit Payments and Expenses	(497,782)	(597,506)	(682,669)	(799,201)
Expected Investment Income	<u>1,292,554</u>	<u>1,315,394</u>	<u>1,415,972</u>	<u>1,622,207</u>
Expected Value at 12/31	\$19,908,417	\$20,189,090	\$21,693,272	\$24,740,692
Market Value at 12/31	<u>18,708,997</u>	<u>20,179,051</u>	<u>23,230,274</u>	<u>22,245,307</u>
Gain or (Loss) <sup>1</sup>	(\$1,199,420)	(\$10,039)	\$1,537,002	(\$2,495,385)
Recognition Percentage Deferred	<u>20%</u>	<u>40%</u>	<u>60%</u>	<u>80%</u>
Gain or (Loss) to be Recognized in Future Years	(\$239,884)	(\$4,016)	\$922,201	(\$1,996,308)
Market Value of Assets at 12/31/2018			\$22,245,307	
Total (Gain) or Loss to be Recognized in Future Years			<u>1,318,007</u>	
Actuarial Value of Assets at 1/1/2019			<u><u>\$23,563,314</u></u>	<sup>2</sup>

<sup>1</sup> Market Value less Expected Value

<sup>2</sup> Limited to between 80% and 120% of Market Value

# East Lampeter Township Police Retirement Plan

*Actuarial Valuation as of January 1, 2019*

## ***Pension Fund and Member Information***

*The table below shows the pension fund activity for 2017 and 2018. The following pages show how the pension fund was invested at the end of 2017 and 2018, the development and funding of the 2017 and 2018 Minimum Municipal Obligations, and plan membership activity during 2017 and 2018.*

	<b>2018</b>	<b>2017</b>
Market Value of Assets as of Beginning of Year	<b>\$23,230,273.94</b>	<b>\$20,179,051.40</b>
<b>Gross Revenues:</b>		
Member Contributions:		
Member Contributions Received	\$171,196.15	\$160,976.08
Receivable at Beginning of Year	(6,050.43)	0.00
Receivable at End of Year	0.00	6,050.43
Total Member Contributions	<u>\$165,145.72</u>	<u>\$167,026.51</u>
Municipal Contributions		
State Aid Portion	\$376,717.29	\$323,817.56
Local Portion	145,548.71	290,073.44
Total Municipal Contribution	<u>\$522,266.00</u>	<u>\$613,891.00</u>
Interest and Dividend Income:	\$528,788.90	\$427,963.49
Realized/(Unrealized) Gains and (Losses) on Investments	<u>(1,401,966.31)</u>	<u>2,525,010.30</u>
Total Revenues	<b>(\$185,765.69)</b>	<b>\$3,733,891.30</b>
<b>Expenses:</b>		
Member Distributions:		
Total Benefit Payments (Lump Sums)	\$0.00	\$0.00
Total Benefit Payments (Monthly)	(628,224.15)	(538,774.80)
Refund of Member Contributions	(9,155.49)	0.00
Total Member Distributions	<u>(\$637,379.64)</u>	<u>(\$538,774.80)</u>
Plan Expenses:		
Actuarial Costs	(\$5,530.00)	(\$5,162.50)
Investment Costs	(147,281.63)	(137,031.46)
Other Administrative Expenses	(9,010.00)	(1,700.00)
Total Plan Expenses	<u>(\$161,821.63)</u>	<u>(\$143,893.96)</u>
Total Expenses	<b>(799,201.27)</b>	<b>(682,668.76)</b>
Market Value of Assets as of End of Year	<b>\$22,245,306.98</b>	<b>\$23,230,273.94</b>
Investment Return Percentage	<b>-3.77%</b>	<b>14.60%</b>

# East Lampeter Township Police Retirement Plan

## Actuarial Valuation as of January 1, 2019

*The table below shows how the pension fund was invested as of December 31, 2017 and December 31, 2018.*

<u>Assets:</u>	<u>12/31/2018</u>	<u>12/31/2017</u>
Cash	\$0.00	\$190.88
Receivables:		
Accrued Interest and Dividends Receivable	\$57,958.31	\$54,645.55
Employee Contributions Receivable	0.00	6,050.43
Prepaid Pensions	50,748.89	0.00
Total Receivables	\$108,707.20	\$60,695.98
Investments:		
Money Market and Other Cash Investments	\$843,470.00	\$580,585.79
Mutual Funds	937,856.91	1,245,922.18
Stocks and Other Equities	12,321,878.70	13,759,381.26
Bonds and Other Fixed Income	5,679,830.82	5,845,247.35
Total Investments	\$19,783,036.43	\$21,431,136.58
Other Assets:		
Alternative Investments	\$2,412,492.23	\$1,738,250.50
Total Other Assets	\$2,412,492.23	\$1,738,250.50
Total Fund Assets	<b>\$22,304,235.86</b>	<b>\$23,230,273.94</b>
Current Liabilities:		
Accounts Payable and Accrued Administrative Expenses	\$0.00	\$0.00
Benefits Payable	(54,640.88)	0.00
Overpayment Due to General Fund	(4,288.00)	0.00
Total Current Liabilities	<b>(\$58,928.88)</b>	<b>\$0.00</b>
Net Assets for Benefits at End of Year	<b>\$22,245,306.98</b>	<b>\$23,230,273.94</b>

# East Lampeter Township Police Retirement Plan

*Actuarial Valuation as of January 1, 2019*

*The table below shows the determination and funding of the plan's Minimum Municipal Obligation (MMO) for 2017 and 2018.*

	<b><u>2018</u></b>	<b><u>2017</u></b>
<u>Determination of Minimum Municipal Obligation:</u>		
Based on Actuarial Valuation as of:	1/1/2017	1/1/2015
Normal Cost Percentage	17.0%	17.2%
Administrative Expense Percentage	4.0%	4.3%
Estimated W-2 Payroll for Previous Year	\$3,266,873	\$3,164,396
Normal Cost	\$555,368	\$544,276
Administrative Expense	130,675	136,069
Annual Cost	<u>\$686,043</u>	<u>\$680,345</u>
Amortization Payment	(433)	91,766
Total Financial Requirement	<u>\$685,610</u>	<u>\$772,111</u>
Member Contributions Anticipated	(163,344)	(158,220)
Funding Adjustment	0	0
Minimum Municipal Obligation	<u><u>\$522,266</u></u>	<u><u>\$613,891</u></u>
<u>Municipal Contributions:</u>		
State Aid Portion	\$376,717	\$323,818
Local Portion	145,549	290,073
Total Municipal Contributions	<u><u>\$522,266</u></u>	<u><u>\$613,891</u></u>
Excess or (Shortfall)	\$0	\$0
<u>State Aid Allocations</u>		
Police Pension Plan Allocation	\$376,717.29	\$323,817.56
Non-Uniformed Pension Plan Allocation	72,984.00	102,890.00
Total State Aid Allocated	<u><u>\$449,701.29</u></u>	<u><u>\$426,707.56</u></u>



# East Lampeter Township Police Retirement Plan

## Actuarial Valuation as of January 1, 2019

*The changes in the plan membership during 2017 and 2018 are shown below.*

### Active Members

Active Members as of January 1, 2017		35
New Members		4
Returned to Active		0
Members No Longer Active:		
Retired	(3)	
Disabled	0	
Terminated with Full Vesting	0	
Terminated without Vesting	(2)	
Total		(5)
Active Members as of January 1, 2019		34
Annual Payroll		\$3,243,241
Average Future Service		10

### Vested Former Members

Vested Former Members as of January 1, 2017		1
Terminated with Vested Pension		0
Retired		0
Deceased		0
Returned to Active		0
Vested Former Members as of January 1, 2019		1
Annual Pension		\$16,194

### Retired Members<sup>1</sup>

Retired Members as of January 1, 2017		16
New Retirees		3
Deceased Retirees		(1)
Returned to Active		0
Retired Members as of January 1, 2019		18
Annual Pension		\$628,812

### Spouse Beneficiaries of Deceased Members

Spouse Beneficiaries of Deceased Members as of January 1, 2017		1
New Spouse Beneficiaries		1
Deceased Spouse Beneficiaries		0
Returned to Active		0
Spouse Beneficiaries of Deceased Members as of January 1, 2019		2
Annual Pension		\$38,456

# East Lampeter Township Police Retirement Plan

Actuarial Valuation as of January 1, 2019

## 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, 2019*

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, 2019

### 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.

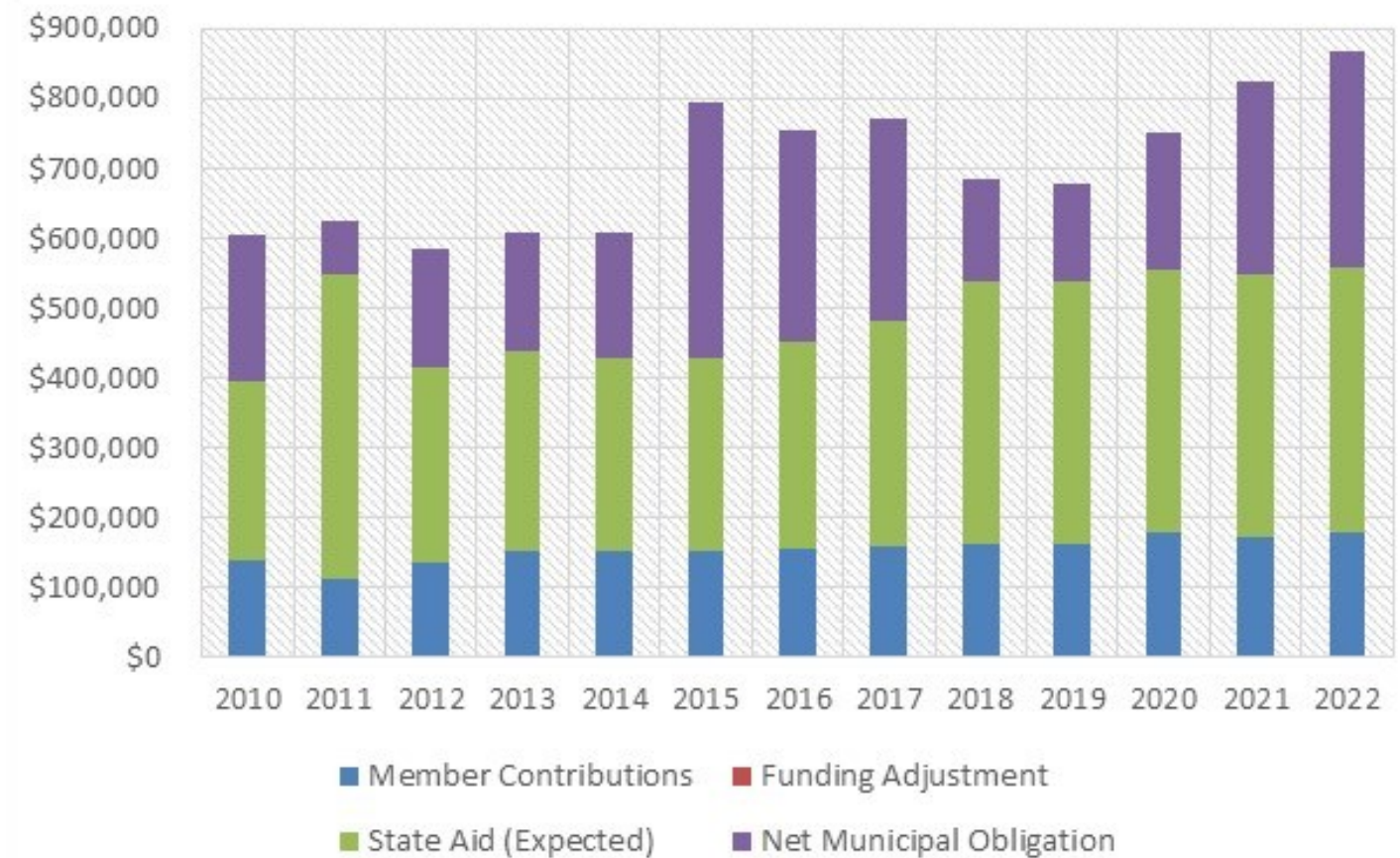
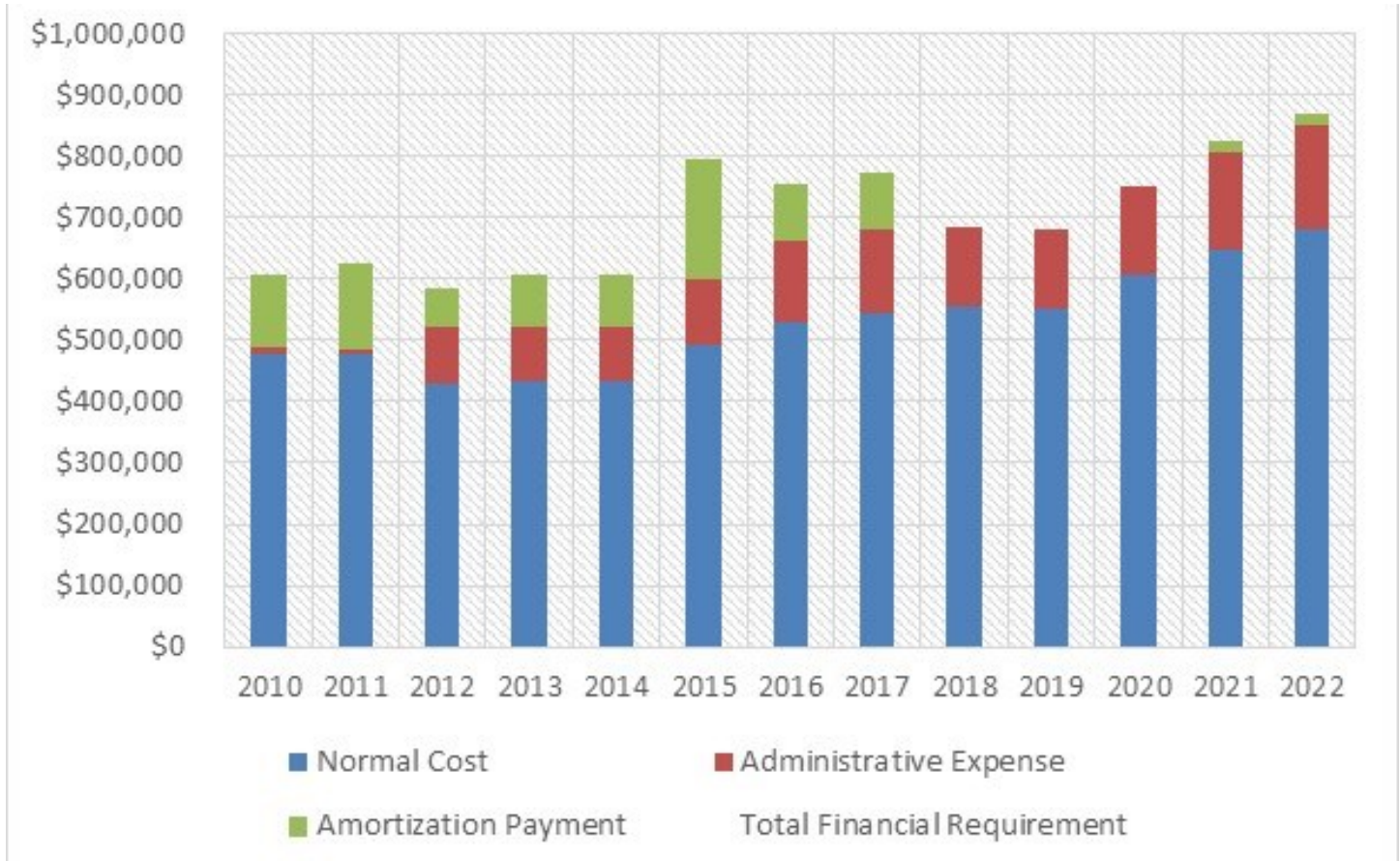
#### Changes in the Plan's Actuarial Assumptions

Mortality: Updated from the RP-2000 table to the PUB-2010 table, uniformed employee rates, with mortality projection based on table MP-2019.



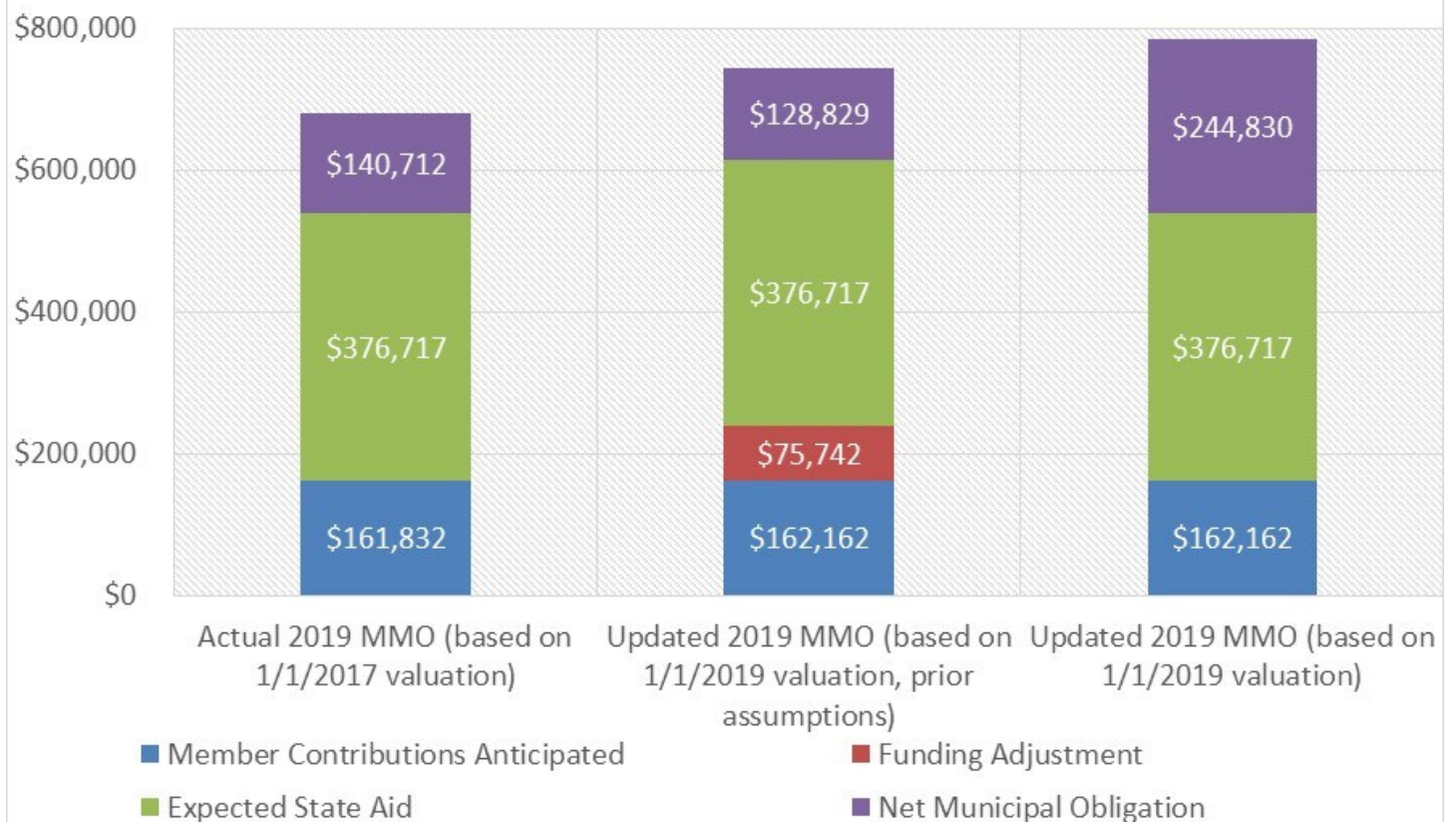
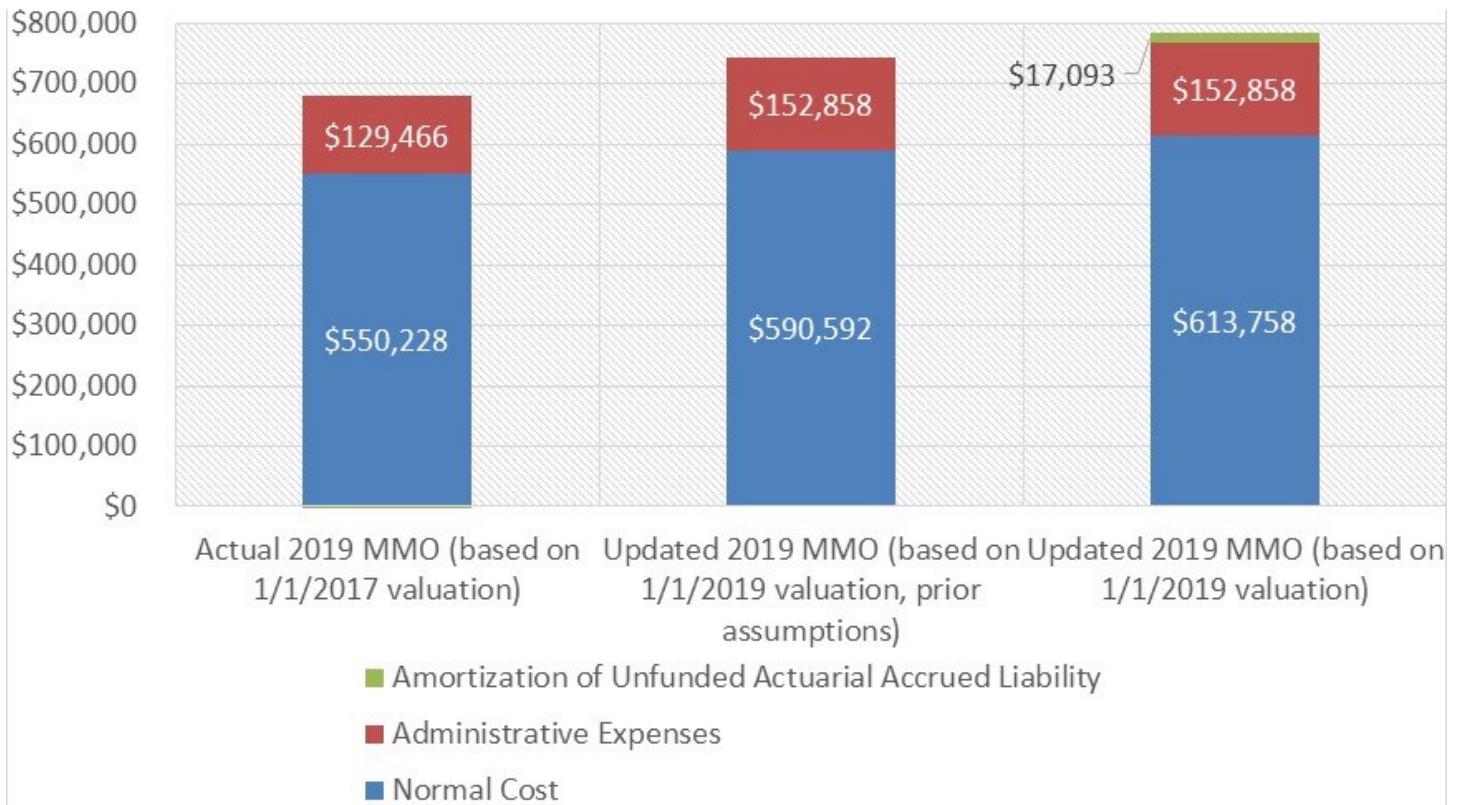
# East Lampeter Township Police Retirement Plan

## Actuarial Valuation as of January 1, 2019



# East Lampeter Township Police Retirement Plan

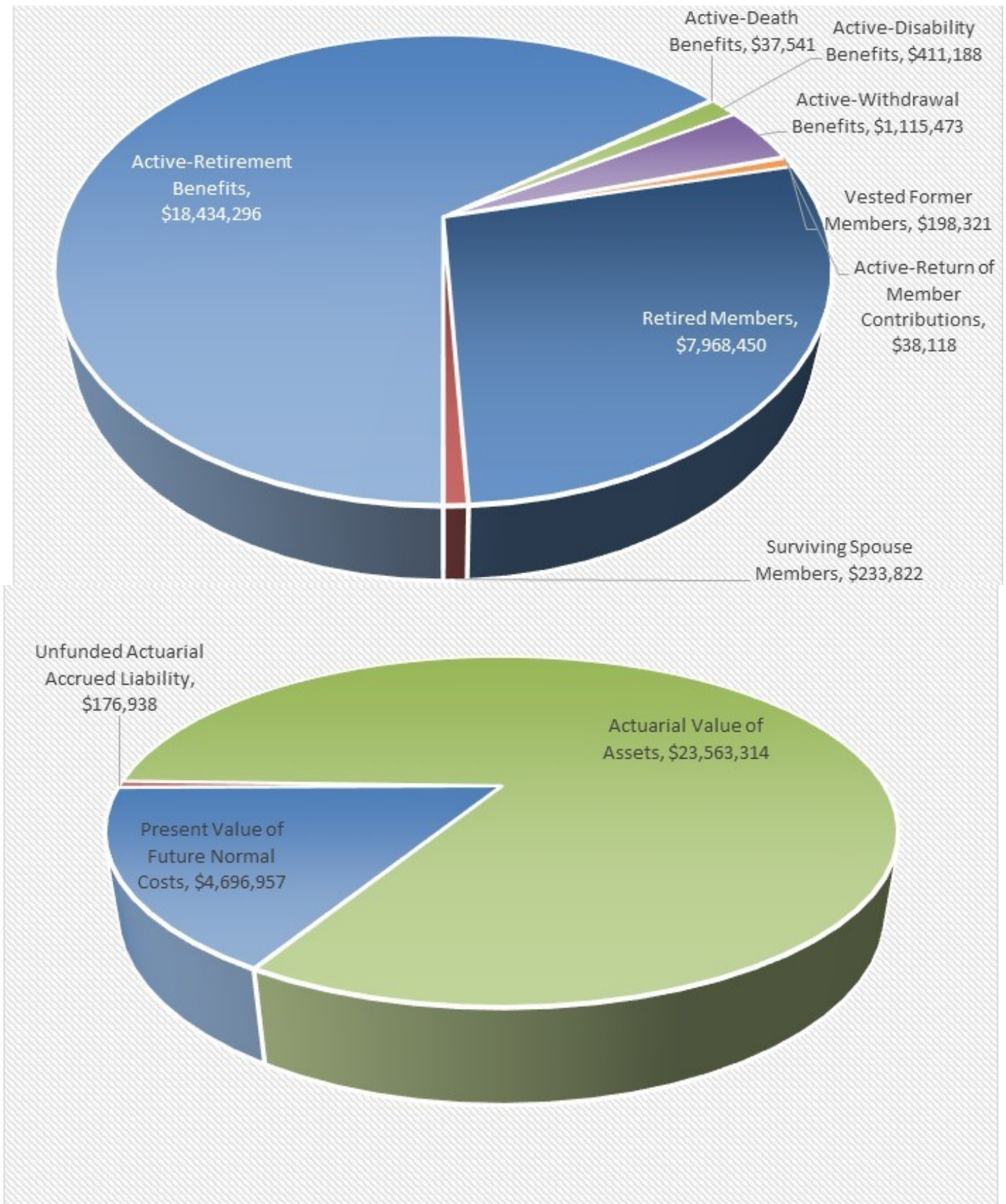
## Actuarial Valuation as of January 1, 2019





# East Lampeter Township Police Retirement Plan

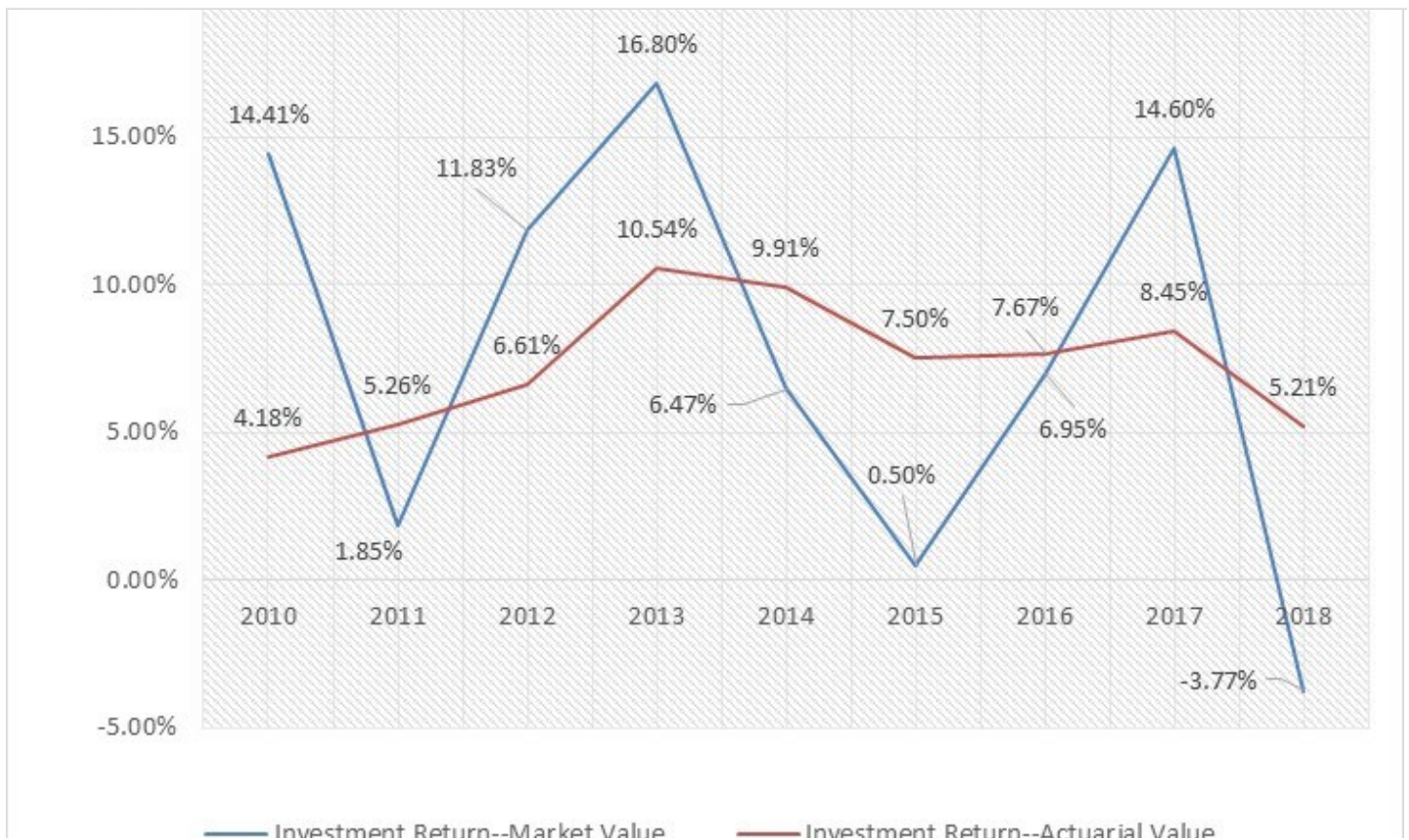
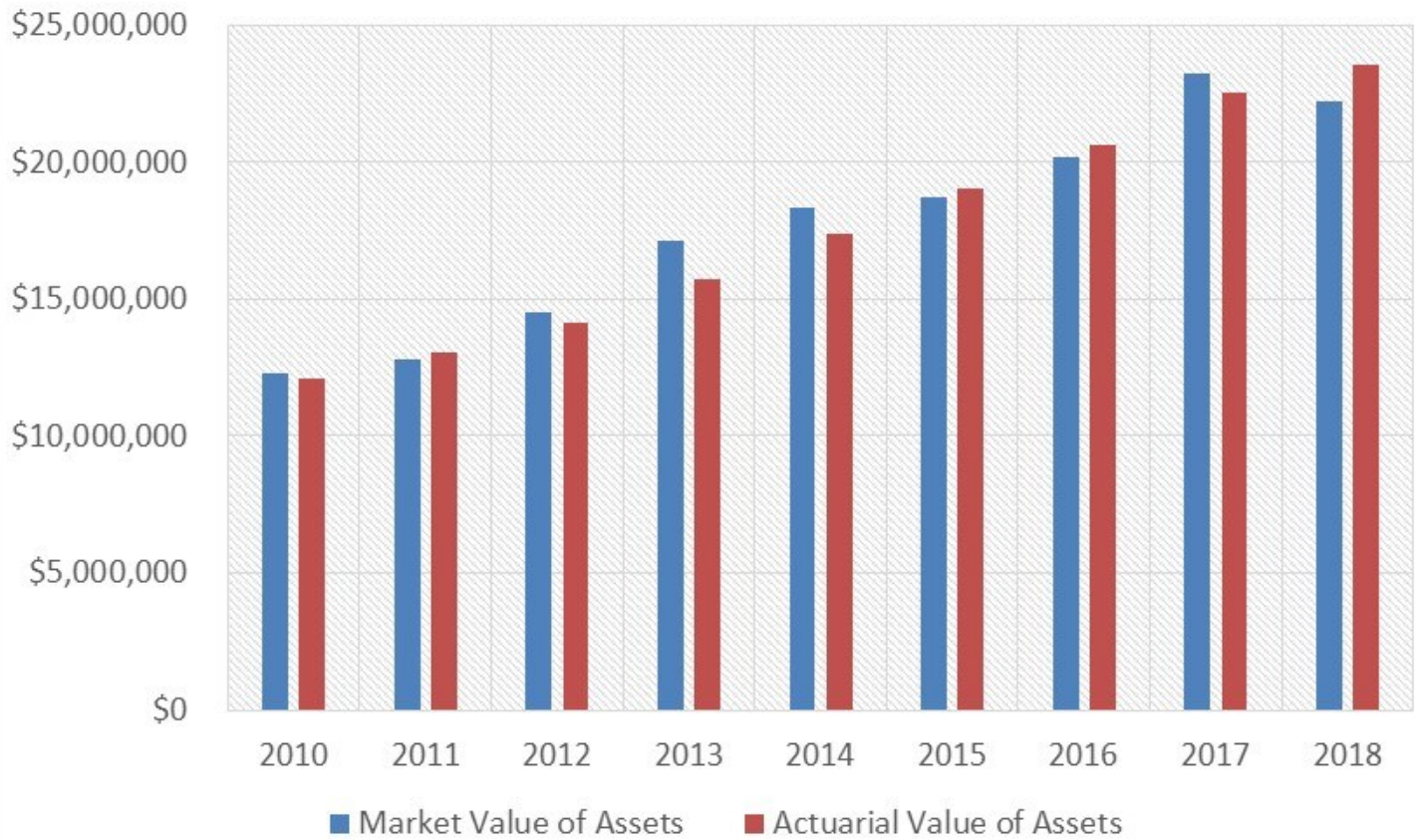
## Actuarial Valuation as of January 1, 2019





# East Lampeter Township Police Retirement Plan

## Actuarial Valuation as of January 1, 2019

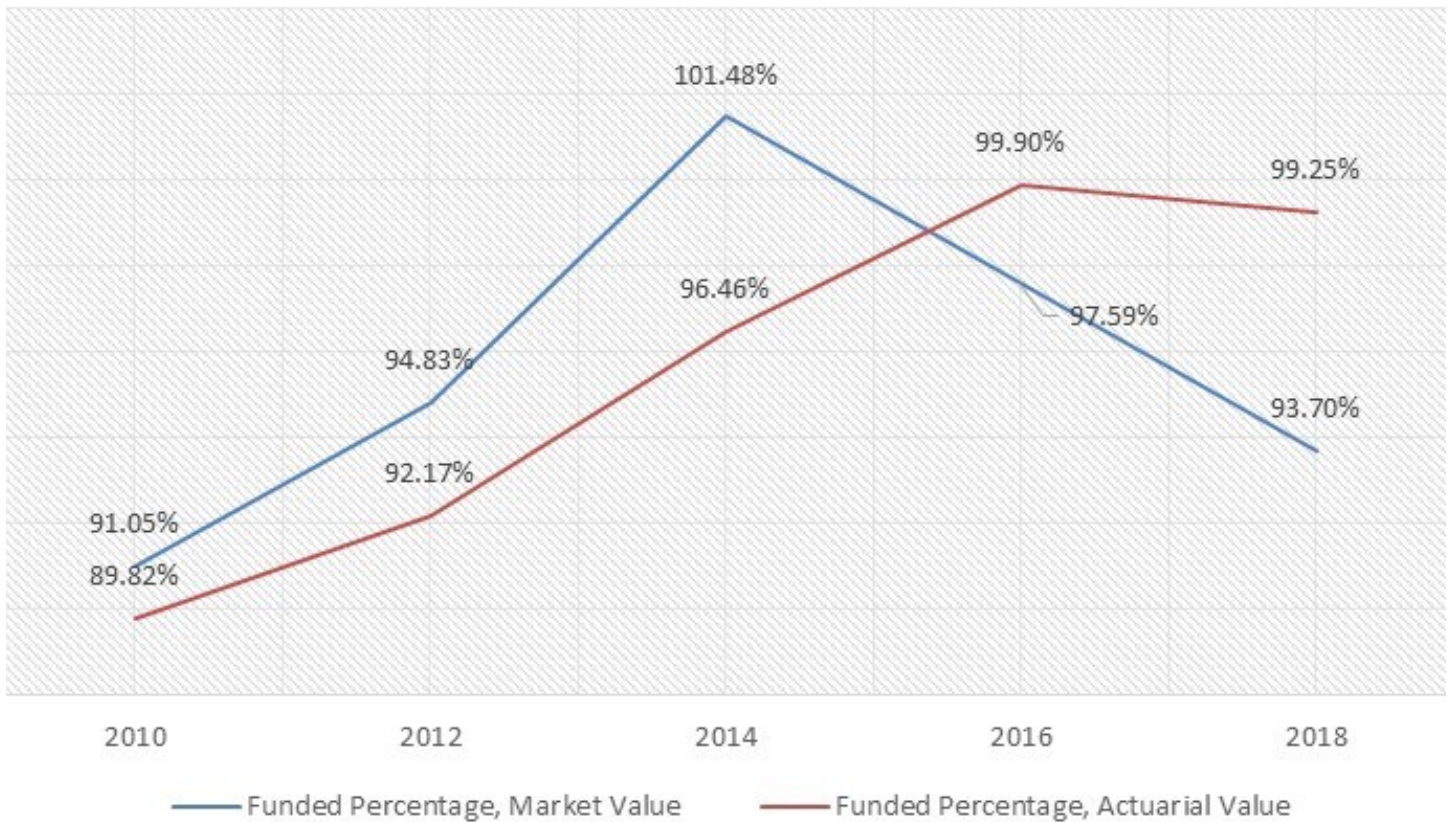




# East Lampeter Township Police Retirement Plan

## Actuarial Valuation as of January 1, 2019

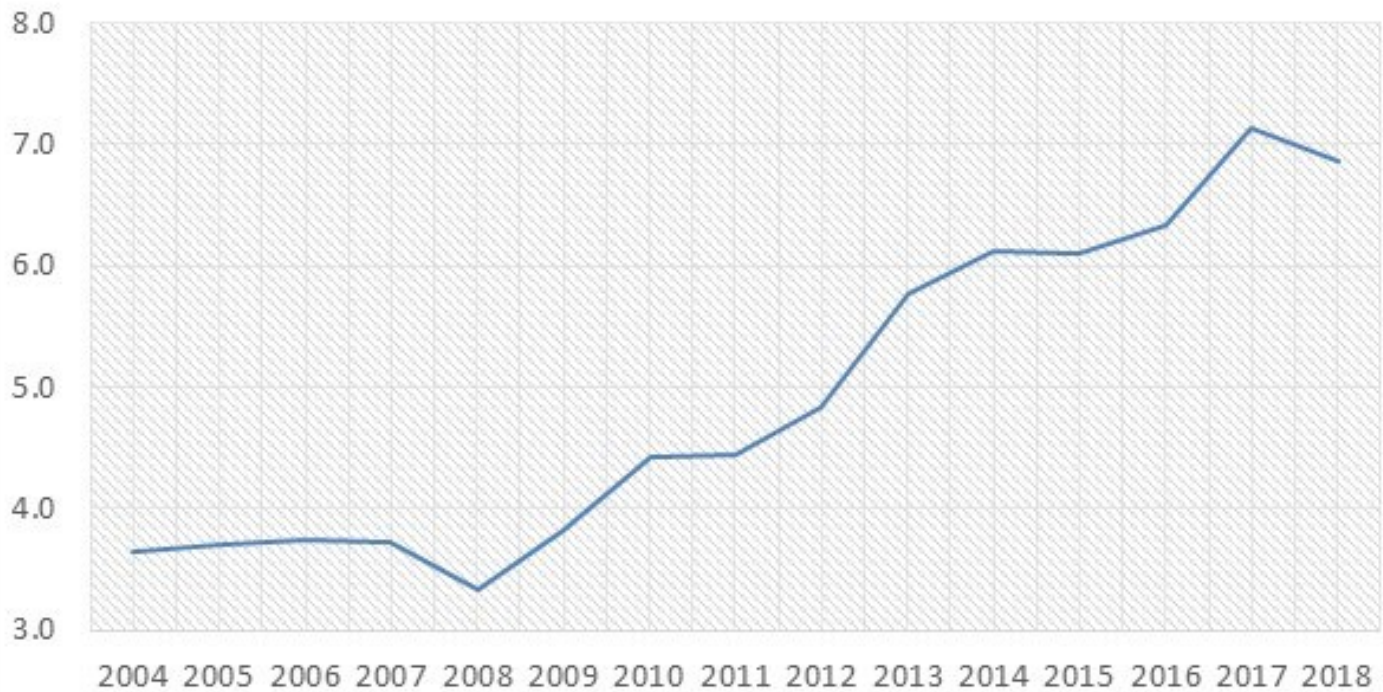
### Funded Percentage



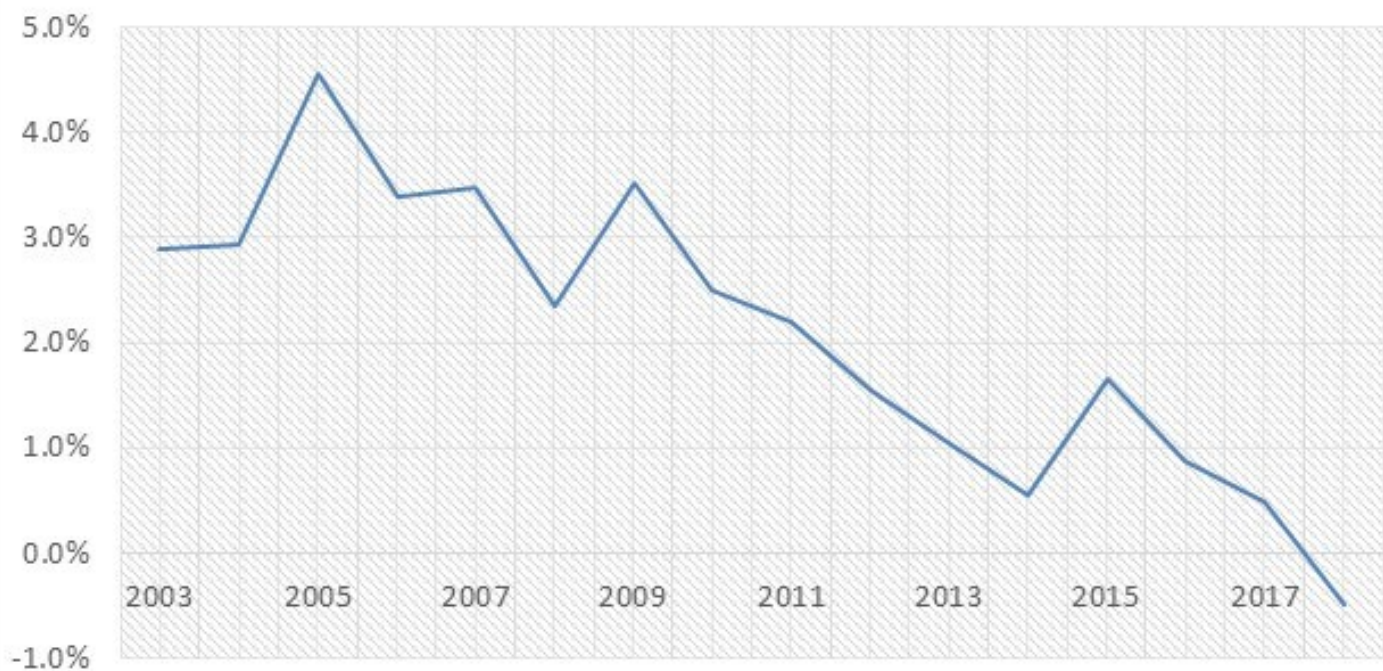
# East Lampeter Township Police Retirement Plan

## *Actuarial Valuation as of January 1, 2019*

### Market Value of Assets/Payroll



### Cash Flow/AssetsBOY



**East Lampeter Township Police Retirement Plan**  
**Vested Former Members as of January 1, 2019**

Name	Sex	Age	Retirement	Dates				Monthly Pension	Pension Form
			Age	Birth	Hire	Termination	Retirement		
Wildt, III, Charles H.	M	46	50.06	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, 2019**

Name	Sex	Ret. Type	Age	Dates				Monthly Pension	Pension Form
				Birth	Hire	Retirement	Spouse Birth		
Bezzard, Ronald S.	M		53	11/8/1965	5/20/1991	6/1/2016	4/24/1959	\$3,574.01	J & 50% Surv.
Bougher, Renee L.	F		60	8/13/1958	12/31/1981	9/1/2008	6/16/1961	2,590.48	J & 50% Surv.
Bowman, John M.	M		53	10/14/1965	6/28/1989	4/1/2018	3/14/1969	4,950.26	J & 50% Surv.
Brinkman, Richard L.	M		77	3/16/1942	6/27/1982	7/1/2002		1,180.72	Life
Crouse, Kenneth A.	M		66	4/20/1953	1/20/1986	11/1/2011	10/18/1953	3,333.38	J & 50% Surv.
Ely, James R.	M		62	11/21/1956		1/1/2016	1/17/1965	4,505.53	J & 50% Surv.
Flory, Clarence L.*	M		80	6/26/1939		1/1/1999	7/15/1939	2,656.69	J & 50% Surv.
Glick, Marguerite E.	F	S	83	6/30/1936	1/0/1900	4/1/1995		1,598.37	Life
Hamill, Kenneth A.	M		70	10/19/1948	1/0/1900	9/1/1990		1,487.10	Life
Heffner, William A.	M		67	11/15/1951		9/14/2007	11/29/1952	1,685.84	J & 50% Surv.
Jerchau, Dale E.	M		68	7/21/1950		2/1/2006	5/4/1952	3,971.22	J & 50% Surv.
Lawrence, Michael D.	M		74	11/16/1944		1/1/1997	8/24/1951	2,498.59	J & 50% Surv.
Leighty, Marlene F.	F		57	6/11/1962	11/5/1984	8/1/2013	6/9/1959	3,637.59	J & 50% Surv.
Lutz, John R.	M		66	10/9/1952		10/9/2002		1,811.24	Life
Mcelheny, Sr., James D.	M		58	6/2/1961		7/1/2017	4/12/1953	4,206.68	J & 50% Surv.
Orr-Sensenig, Audrey	M	S	55	11/24/1963		5/1/2013		1,606.32	Life
Reed, Robert S.	M		60	5/26/1959		6/1/2009	5/26/1959	934.49	J & 50% Surv.
Savage, Ronald W.	M		75	4/9/1944		5/3/1994	12/10/1949	2,478.84	J & 50% Surv.
Velez, Michelle R.	F		53	5/6/1966		6/1/2016	5/6/1966	2,483.95	J & 50% Surv.
Weaver, Robin R.	M		64	2/2/1955		6/1/2017	2/9/1969	4,414.38	J & 50% Surv.

Total								\$55,605.68	
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\* Benefit partially funded by annuity.

**East Lampeter Township Police Retirement Plan**  
**Vested Former Members as of January 1, 2019**

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Total								\$55,605.68	
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