East Lampeter Township Defined Benefit Plan

Actuarial Valuation as of January 1, 2019

Municipal Finance Partners, Inc.

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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.

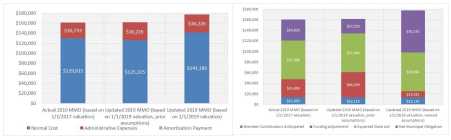
Contribution Requirements: the Minimum Municipal Obligation

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 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: 10.8%** of active member compensation
- **Administrative Expenses: 2.8%** of active member compensation
- A **Funding Adjustment** of **$11,933** reduces the MMO
- **Member Contributions** of **1.0%** 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 9.3% to 10.8% of compensation.
- Administrative expenses have increased from 2.2% to 2.8% of compensation.
- The funding adjustment has decreased from $33,869 to $11,933 due to the change in actuarial assumptions, offset by experience gains that have decreased the plan's overfunding.

The plan experienced an actuarial gain of $103,999, which was the net of:

- Experience gains of $119,781.
- Investment losses of $15,782 and

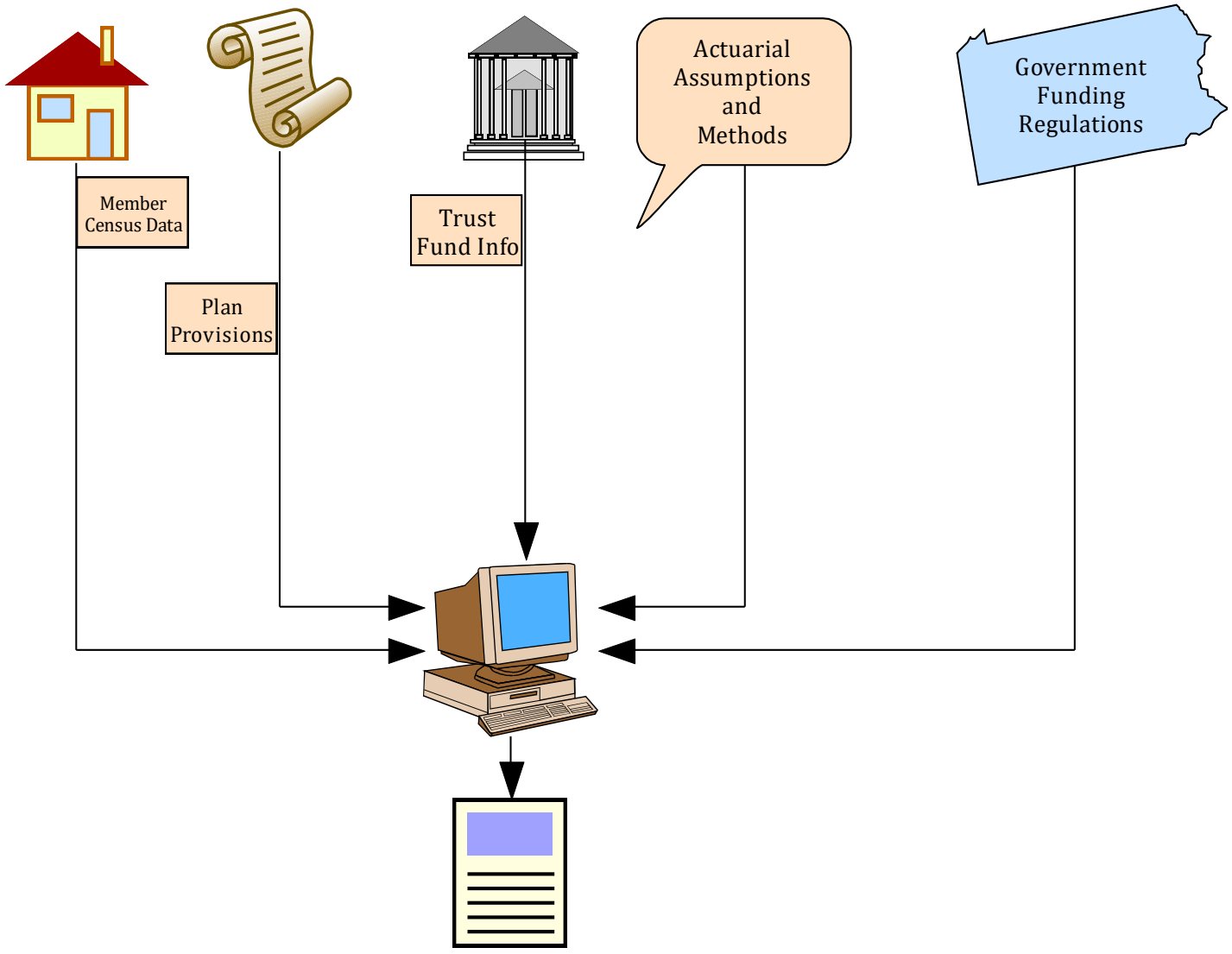
These charts show the makeup of plan assets and liabilities as of the valuation date.

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 detailed MMO calculations for 2017 and 2018 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 2017 and 2018.

The market value of plan assets has grown from $3,698,415 at December 31, 2016 to $4,026,866 at December 31, 2018. The fund earned returns of 14.72% in 2017 and -3.85% in 2018.

The plan uses an *actuarial smoothing* method to reduce the impact of year-to-year fluctuations in investment returns. Under this method the actuarial valuation of assets is $4,266,970 at January 1, 2019.

On an actuarial basis, the fund earned 8.62% in 2017 and 5.28% in 2018, compared to the actuarially assumed rate of 7.0%.

The lower than expected returns caused an investment loss of $15,782

(about 0.4% of plan assets) during 2017 and 2018.

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 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, 12 new employees entered the plan, compared to 3 retirements and 6 terminations of employment (2 were vested and 4 were not), increasing the active membership from 22 to 25 employees. In addition, two vested former members retired, one retiree died leaving a spouse beneficiary and one spouse beneficiary died. As of January 1, 2019 the plan membership consisted of 25 active employees, 7 vested former members, 14 retired employees and 3 surviving spouses of retired members.

Since the prior actuarial valuation, the plan had an experience gain of $119,781 (2.9% of liabilities). This was due mostly to retiree deaths, salary increases that were smaller than expected and employee terminations.

Page 14 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. The detailed calculation of the actuarial value of assets is

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For this actuarial valuation, the plan's mortality table has been updated to the PUB-2010 table for non-uniformed employees and includes mortality improvement scale MP-2019. This changed has served to increase costs, as retired members are expected to live and collect their pensions for a longer period.

There were no other changes in the plan's actuarial assumptions. The actuarial assumptions are described on page 17 of this report.

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, as well as state and federal law.

The plan's provisions are described in detail on pages 15-16 of this report.

The member contribution rate has decreased from 3.5% in 2017 to 1.0% of compensation for 2019, as the rate is adjusted annually based on pension fund investment returns in the prior year.

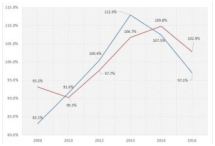
There have been no other changes in the plan provisions since the prior actuarial valuation.

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 from 109.8% to 102.9% as of January 1, 2019, due to the impact of the change in actuarial assumptions, offset by actuarial gains. On a market value basis, the funding percentage was 97.1%. 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 poten-

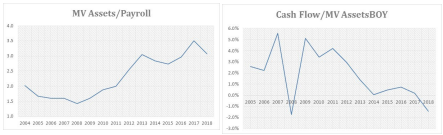
tential that changes in assets and liabilities do not match. As financial instruments, pension liabilities behave like bonds; their market value rising and falling as interest rates fall and rise. Equity investments achieve larger returns as a *risk premium*. This risk could be defeased by investing solely in fixed income investments that match the 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 these 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 require-

ments 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.

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

March 30, 2020
Date

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)		$141,185
Normal Cost (% of Payroll)		10.8%
Present Value of Future Benefits		
Active Members		
Retirement Benefits	$3,986,862	
Death Benefits	52,125	
Disability Benefits	0	
Withdrawal Benefits	7,058	
Return of Member Contributions	292	
Total Active Members		$4,046,337
Vested Former Members		176,945
Retired Members		1,373,898
Disabled Members		0
Surviving Spouse Members		199,609
Total Present Value of Future Benefits		$5,796,789
Present Value of Future Normal Costs		(1,649,150)
Actuarial Accrued Liability		$4,147,639
Actuarial Value of Assets		(4,266,970)
Unfunded Actuarial Accrued Liability		($119,331)

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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 1/1/2017		($338,689)
Normal Cost	$228,762	
Administrative Expense	72,452	
Interest on Above Items	(19,643)	
Total		281,571
Employer Contributions	(42,081)	
Member Contributions	(67,070)	
General Municipal Pension System State Aid	(175,874)	
Interest on Contributions	(31,830)	
Total		(316,855)
Adjustment for Funding Deviation		0
Modification to Actuarial Assumptions		362,758
Modification to Active Member Benefits		(4,117)
Modification to Retired Member Benefits		0
Actuarial (Gain) or Loss		
Investment (Gain) or Loss	$15,782	
Experience (Gain) or Loss	(119,781)	
Adjustment for Funding Deviation	0	
Total		(103,999)
Unfunded Actuarial Accrued Liability at 1/1/2019		($119,331)

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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	$141,185
Administrative Expenses[1]	36,226
Amortization of Unfunded Actuarial Accrued Liability	0
Total Financial Requirement	$177,411
Member Contributions Anticipated	$13,119
Funding Adjustment	11,933
Expected State Aid	72,984
Net Municipal Obligation	79,375
Total Financial Requirement	$177,411

[1] Average of administrative expenses over two prior years:
2017: $31,438, 2018: $41,014

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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.

	2015	2016	2017	2018
Market Value at January 1	$3,397,671	$3,436,868	$3,698,415	$4,250,358
Contributions	140,237	146,498	150,408	134,617
Benefit Payments and Expenses	(123,737)	(120,870)	(143,310)	(195,790)
Expected Investment Income	238,414	241,478	259,137	295,384
Expected Value at 12/31	$3,652,585	$3,703,974	$3,964,650	$4,484,569
Market Value at 12/31	3,436,868	3,698,415	4,250,358	4,026,866
Gain or (Loss)[1]	($215,717)	($5,559)	$285,708	($457,703)
Recognition Percentage Deferred	20%	40%	60%	80%
Gain or (Loss) to be Recognized in Future Years	($43,143)	($2,224)	$171,425	($366,162)

Market Value of Assets at 12/31/2018	$4,026,866
Total (Gain) or Loss to be Recognized in Future Years	240,104
Actuarial Value of Assets at 1/1/2019	$4,266,970 [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 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.

	2018	2017
Market Value of Assets as of Beginning of Year	**$4,250,357.78**	**$3,698,415.39**
Gross Revenues:		
Member Contributions:	$22,191.68	$44,877.94
Municipal Contributions		
State Aid Portion	$72,984.00	$102,890.00
Local Portion	39,441.32	2,639.82
Total Municipal Contribution	$112,425.32	$105,529.82
Interest and Dividend Income:	$93,767.46	$77,814.52
Realized/(Unrealized) Gains and (Losses) on Investments	(256,086.61)	467,030.16
Total Revenues	**($27,702.15)**	**$695,252.44**
Expenses:		
Member Distributions:		
Total Benefit Payments (Lump Sums)	$0.00	$0.00
Total Benefit Payments (Monthly)	(130,540.14)	(108,047.60)
Refund of Member Contributions	(24,235.62)	(3,824.86)
Total Member Distributions	($154,775.76)	($111,872.46)
Plan Expenses:		
Actuarial Costs	($3,440.00)	($4,350.00)
Investment Costs	(26,961.92)	(24,850.06)
Other Administrative Expenses	(10,612.00)	(2,237.53)
Total Plan Expenses	($41,013.92)	($31,437.59)
Total Expenses	**($195,789.68)**	**($143,310.05)**
Market Value of Assets as of End of Year	**$4,026,865.95**	**$4,250,357.78**
Investment Return Percentage	**-3.85%**	**14.72%**

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

Assets:	12/31/2018	12/31/2017
Cash	$0.00	$35.21
Receivables:		
Accrued Interest and Dividends Receivable	$10,192.45	$9,962.88
Employee Contributions Receivable	0.00	0.00
Employer Contributions Receivable	0.00	0.00
Prepaid Benefits	12,385.08	0.00
Total Receivables	$22,577.53	$9,962.88
Investments:		
Money Market and Other Cash Investments	$155,025.12	$103,614.71
Mutual Funds	173,219.88	229,925.83
Stocks and Other Equities	2,277,472.79	2,539,494.13
Bonds and Other Fixed Income	990,790.57	1,060,812.07
Total Investments	$3,596,508.36	$3,933,846.74
Other Assets:		
Alternative Investments	$430,010.68	$309,023.79
Total Other Assets	$430,010.68	$309,023.79
Total Fund Assets	**$4,049,096.57**	**$4,252,868.62**
Current Liabilities:		
Accounts Payable and Accrued Administrative Expenses	$0.00	$0.00
Benefits Payable	(22,230.62)	(2,510.84)
Net Unsettled Purchases/Sales	0.00	0.00
Total Current Liabilities	**($22,230.62)**	**($2,510.84)**
Net Assets for Benefits at End of Year	**$4,026,865.95**	**$4,250,357.78**

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

	2018	2017
Determination of Minimum Municipal Obligation:		
Based on Actuarial Valuation as of:	1/1/2017	1/1/2015
Normal Cost Percentage	9.3%	9.7%
Administrative Expense Percentage	2.2%	2.4%
Estimated W-2 Payroll for Previous Year	$1,335,658	$1,282,823
Normal Cost	$124,217	$124,434
Administrative Expense	29,384	30,788
Annual Cost	$153,601	$155,222
Amortization Payment	0	0
Total Financial Requirement	$153,601	$155,222
Member Contributions Anticipated	(46,748)	(32,071)
Funding Adjustment	(33,869)	(20,261)
Minimum Municipal Obligation	$72,984	$102,890
Municipal Contributions:		
State Aid Portion	$72,984	$102,890
Local Portion	39,441	2,640
Total Municipal Contributions	$112,425	$105,530
Excess or (Shortfall)	$39,441	$2,640
State Aid Allocations		
Non-Uniformed Pension Plan Allocation	$72,984.00	$102,890.00
Police Pension Plan Allocation	376,717.29	323,817.56
Total State Aid Allocated	$449,701.29	$426,707.56

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

Active Members		
Active Members as of January 1, 2017		22
New Members		12
Returned to Active		0
Members No Longer Active:		
Retired	(3)	
Disabled	0	
Deceased	0	
Terminated with Full Vesting	(2)	
Terminated with Partial Vesting	0	
Terminated without Vesting	(4)	
Total		(9)
Active Members as of January 1, 2019		25
Annual Payroll		$1,311,877
Average Future Service		18

Vested Former Members	
Vested Former Members as of January 1, 2017	7
Terminated with Vested Pension	2
Deferred Survivor Pension	0
Retired	(2)
Deceased	0
Returned to Active	0
Vested Former Members as of January 1, 2019	7
Annual Pension	$30,136

Retired Members	
Retired Members as of January 1, 2017	11
New Retirees	4
Deceased Retirees	(1)
Returned to Active	0
Retired Members as of January 1, 2019	14
Annual Pension	$134,613

Spouse Beneficiaries of Deceased Members	
Spouse Beneficiaries of Deceased Members as of January 1, 2017	3
New Spouse Beneficiaries	1
Deceased Spouse Beneficiaries	(1)
Returned to Active	0
Spouse Beneficiaries of Deceased Members as of January 1, 2019	3
Annual Pension	$22,130

Section 3 – Summary of Plan Provisions
The Plan is governed by a plan document which was restated in its entirety effective January 1, 1997.

The following is a summary of the provisions of the plan document; actual benefits are determined by the document itself.

Plan Membership
A non-uniformed employee of the Township enters the plan on the December 31 after age 20½ and completion of 6 months of eligibility service.

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. Benefits payable in a different form (e.g., with payments continued for the life of a designated beneficiary after the member's death) and benefits beginning before or after normal retirement are actuarially adjusted from this normal retirement benefit to reflect the different period of payment.

A member's Normal Retirement Date is the first day of the month after the member turns age 65 and completes 5 years of plan membership.

For employees hired prior to January 1, 2014, the Normal Retirement Benefit is calculated as 1.9% of average compensation multiplied by the member's benefit service, but no greater than 60% of average compensation. For employees hired on or after January 1, 2014, the Normal Retirement Benefit is calculated as 1.5% of average compensation multiplied by the member's benefit service, but no greater than 60% of average compensation.

Average compensation is calculated as the average of total pay over the 5 consecutive year period during the last 10 years of employment as a non-uniformed employee with the Township that produces the highest average. Pay during partial years of employment will be annualized for this purpose.

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 using compensation and service to the date of determination. The accrued benefit at any date will be no less than the accrued benefit at December 31, 1983 and no greater than 60% of average compensation.

Payment of Benefits
Upon retirement, the member may elect to receive his pension benefits under one of the following payment forms:

- Under the Life Annuity payment form, benefits are payable for the member's lifetime with payments ceasing upon his death.
- Under the Joint and Survivor payment form, a portion (50%, 66 2/3% or 100%) of the member's pension is payable to his spouse or other designated beneficiary.
- Under the Life with 60, 120 or 180 Payments Guaranteed payment form, if a member dies before the guaranteed monthly benefit payments have been made, the full pension will continue to his designated beneficiary after his death until the guaranteed payments have been made.

Benefits under the plan are calculated as a monthly pension under the Life Annuity option. If a benefit is paid in a different form, the benefit amount is actuarially adjusted to reflect the potential additional benefit payments.

Early Retirement Benefit
If a member terminates within 10 years of his normal retirement, he will be eligible to receive a monthly pension payable immediately equal to the benefit accrued at the date of termination, reduced actuarially.

As described above, benefits under the plan are calculated as a monthly pension beginning at the member's normal retirement date. If a benefit is paid at a date prior to normal retirement, the benefit amount is actuarially adjusted to reflect the additional benefit payments.

Late Retirement Benefit
If a member continues employment after his normal retirement date, he will be eligible to receive a monthly pension payable immediately equal to the greater of the benefit accrued at the date of actual retirement, or the actuarial equivalent of his normal retirement pension.

As described above, benefits under the plan are calculated as a monthly pension beginning at the member's normal retirement date. If a benefit is paid at a date after normal retirement, the benefit amount is actuarially adjusted to reflect the lost benefit payments and compared to the increase in the accrued pension to determine the larger benefit amount.

Death Benefit
If a member dies after being at least partially vested in his accrued benefit, his surviving spouse or eligible child will receive a pension at his earliest retirement date equal to 50% of the pension the member would have received had he terminated at the time of his death, survived to his earliest retirement date and retired with a joint and 50% survivor form of payment.

If a member dies and is not at least partially vested in his accrued pension, his designated beneficiary will receive the value of assets allocated at December 31, 1983 under the prior plan provisions in effect at that time.

Termination of Employment Benefits
If a member terminates employment prior to retirement eligibility, he will be eligible for a benefit from the plan equal to his accrued pension at the date of his termination multiplied by the vesting percentage from the table below. The benefit will be deferred to his earliest retirement date.

Years of Service	*Vested Percentage*
0-2	0%
3	20%
4	40%
5	60%
6	80%
7+	100%

Contributions
Members are required to contribute 1.0% of their compensation. The rate will be adjusted upward each year by the excess of 6.0% over the prior year's investment return (rounded to the nearest ¼%) and decreased by the excess of the prior year's investment return over 8.0% (rounded to the nearest ¼%). The contribution rate shall not be less than 1% nor greater than 5% Member contributions earn 5.0% interest from the end of the plan year in which it was deposited.

Service
Eligibility service is credited for all years and months employed with the Township, plus periods of military service.

Vesting service is credited for all calendar years of employment with the Township in which the employee works 1,000 or more hours.

Benefit service is credited for all years and months (calculated to the completed month) of membership in the plan.

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

Mortality
Assumed rates of employee mortality are based on the PUB-2010 table, non-uniformed rates, with mortality improvement using Table MP-2019.

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
None Assumed.

Retirement
Members are assumed to retire on their normal retirement date or on the valuation date, if later.

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.

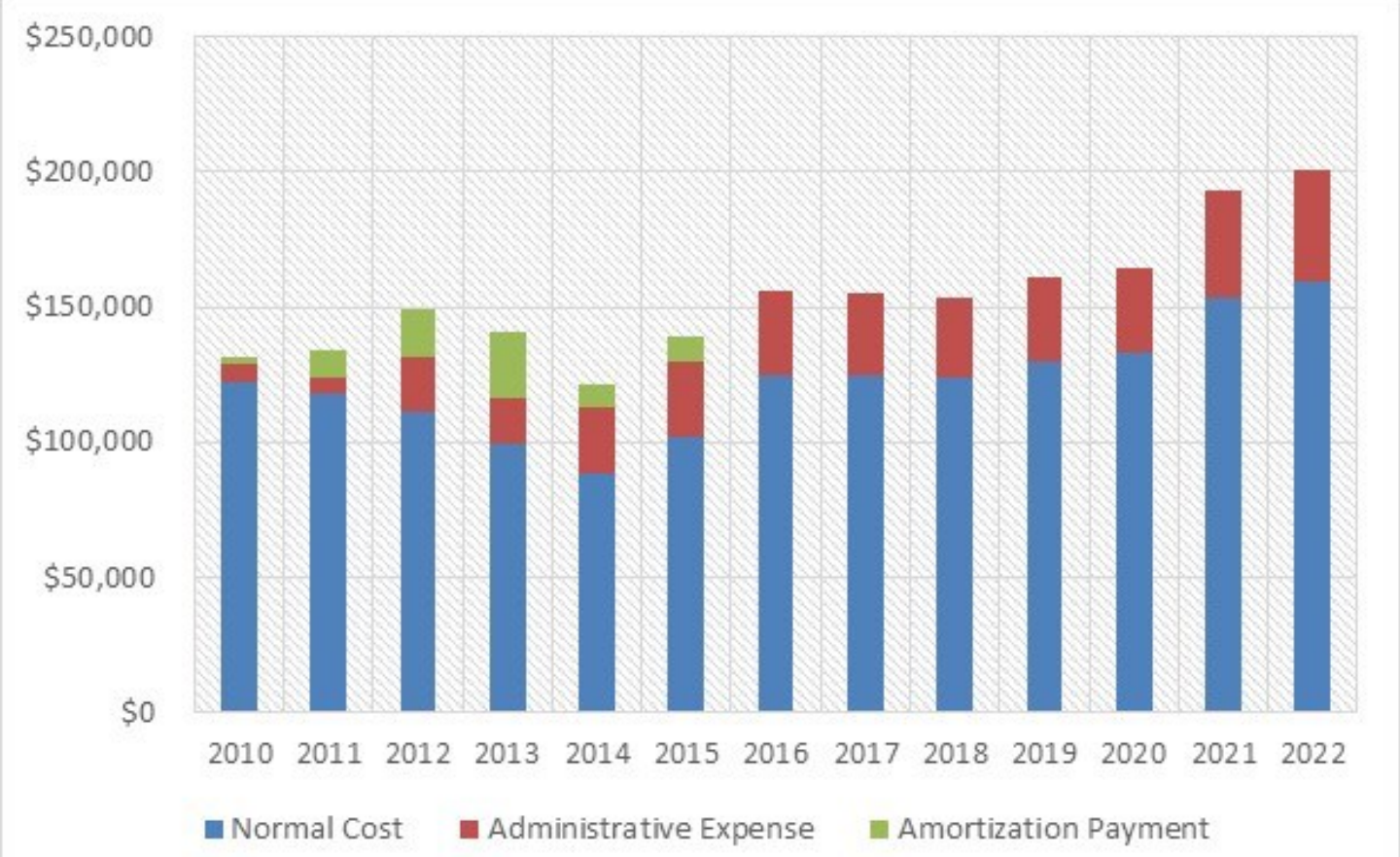
Actuarial Value of Assets
The valuation uses an asset smoothing method to even out the year-to-year fluctuations in the investment markets. Under the method being used for this valuation, the investment gains or losses (i.e., actual vs. expected performance) are recognized over a five-year period. The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

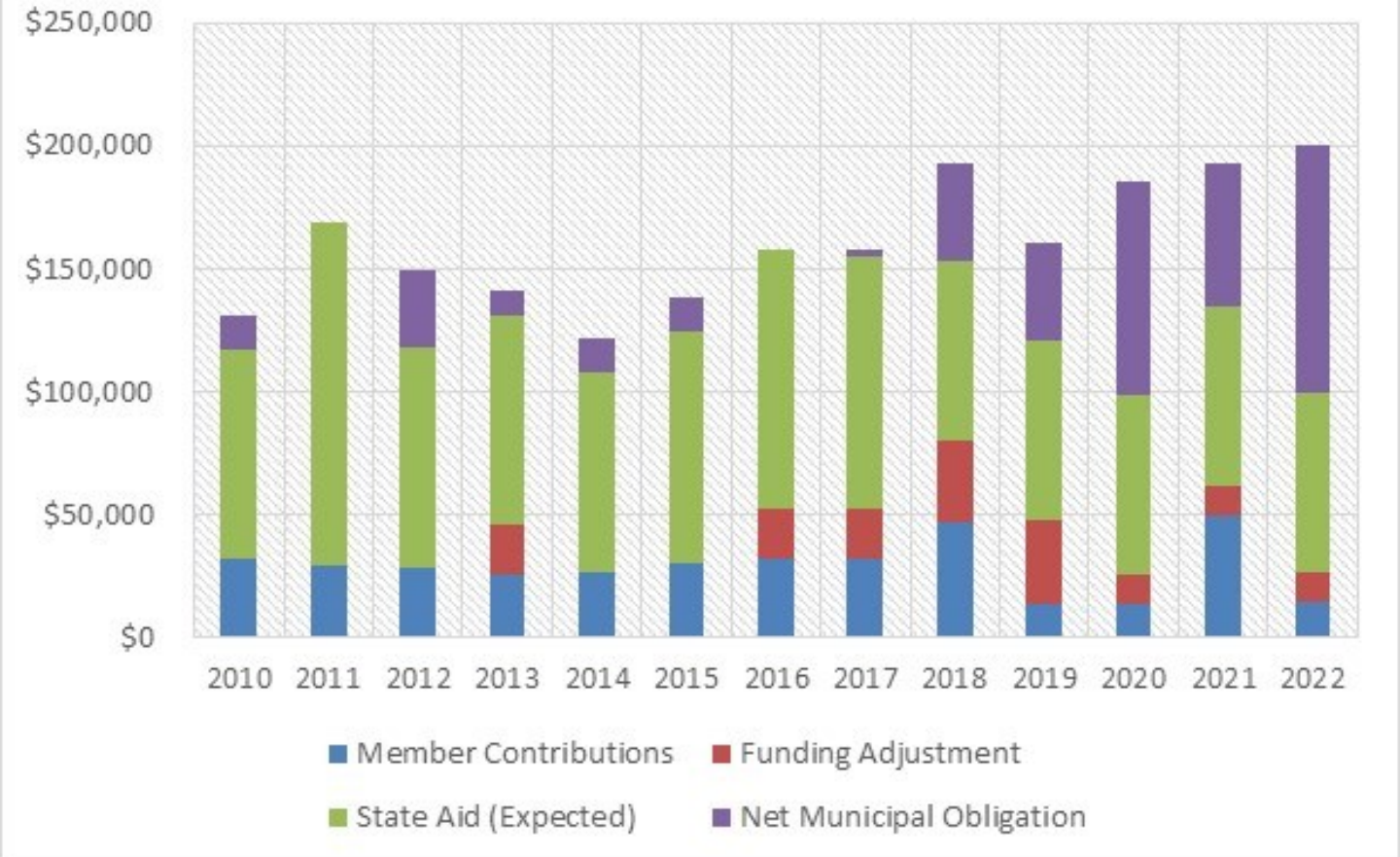
Funding Method
The actuarial cost method is the way that unfunded plan costs are allocated over future years, including the current year. This actuarial valuation uses the *Entry Age Normal Actuarial Cost Method*, as required under Act 205 of 1984. Under this method, the normal cost and actuarial accrued 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 table was updated from the RP-2000 table to the PUB-2010 table, non-uniformed rates, with mortality improvement using Table MP-2019.

East Lampeter Township Defined Benefit Plan

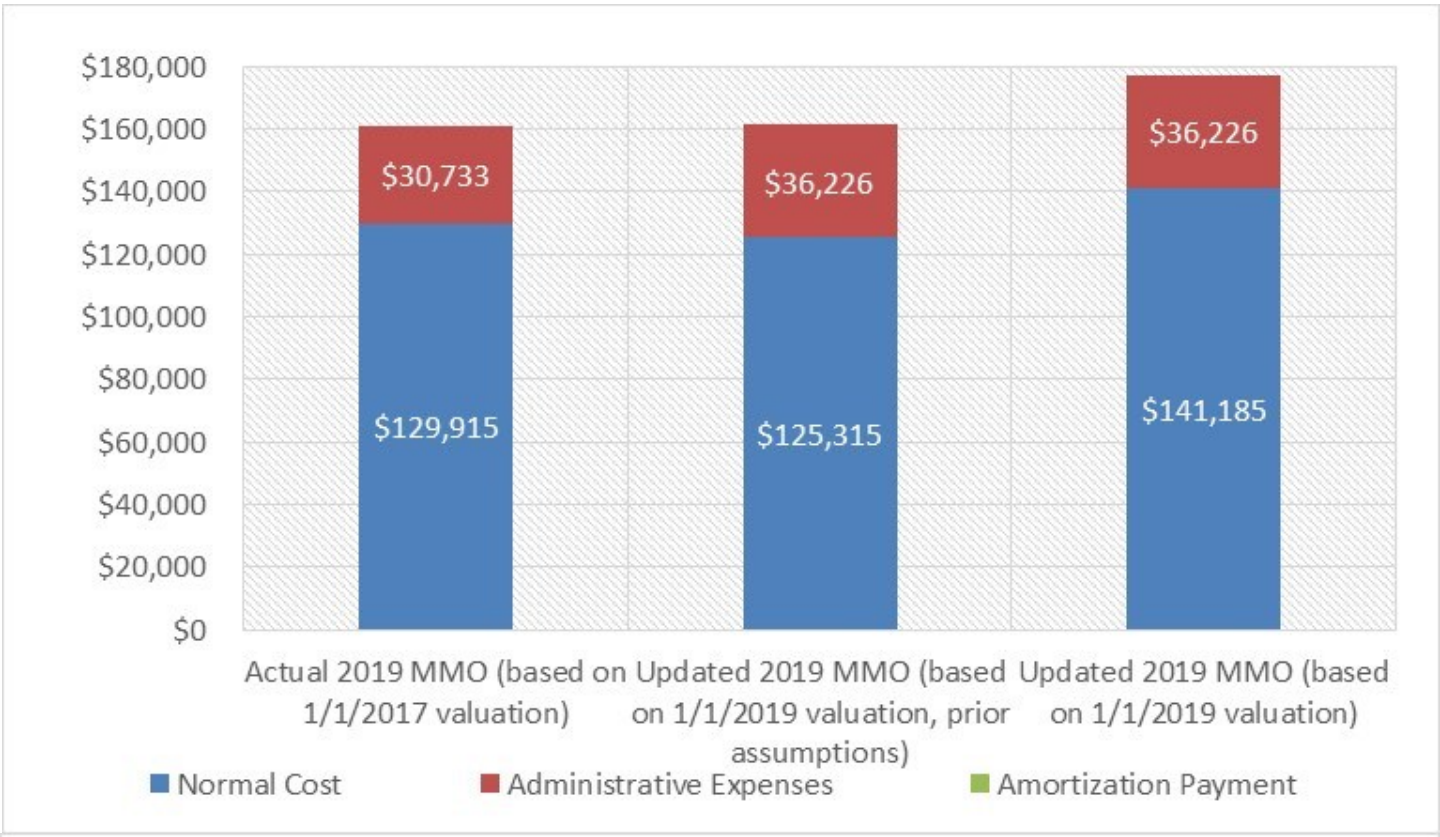
Actuarial Valuation as of January 1, 2019

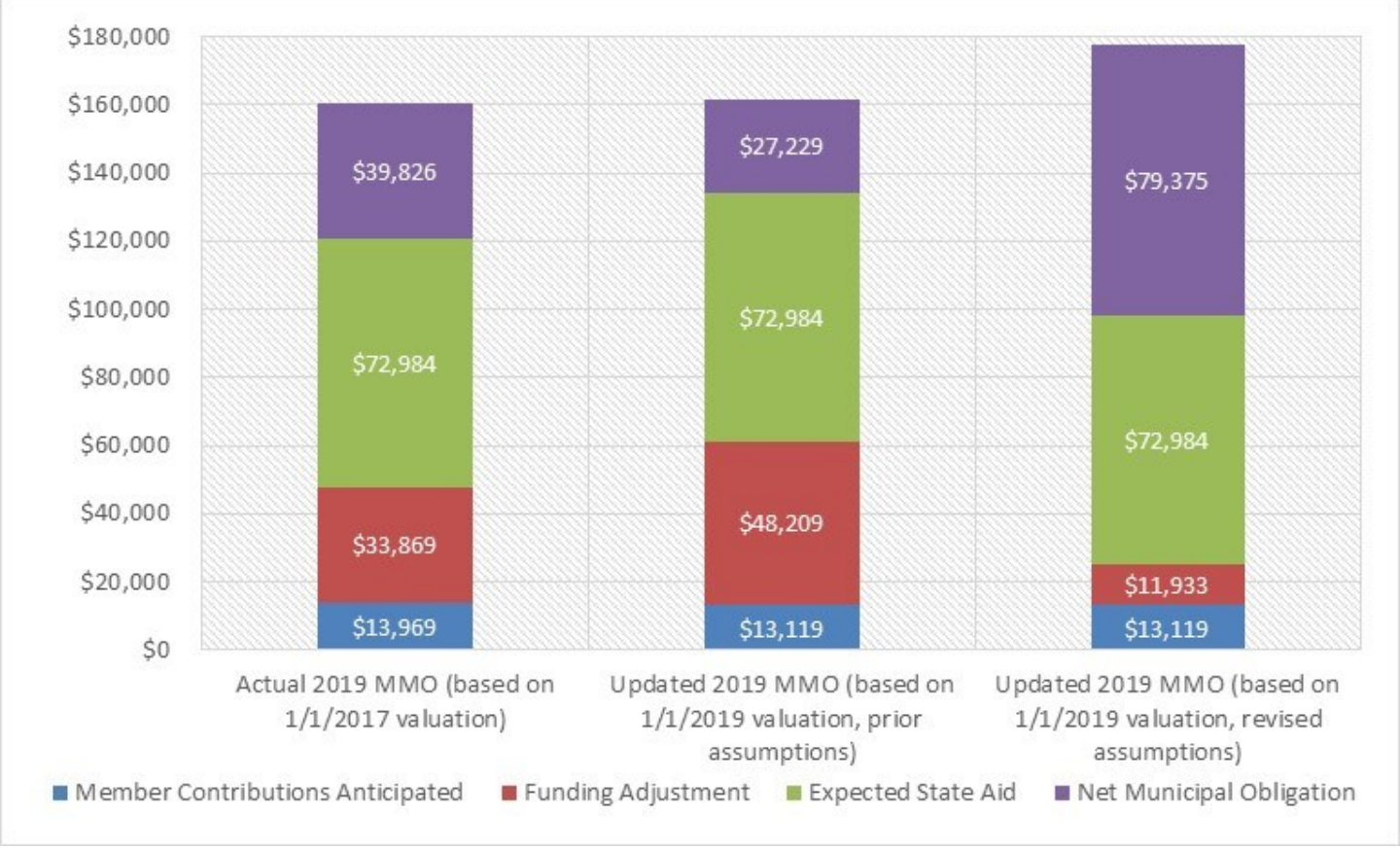




East Lampeter Township Defined Benefit Plan

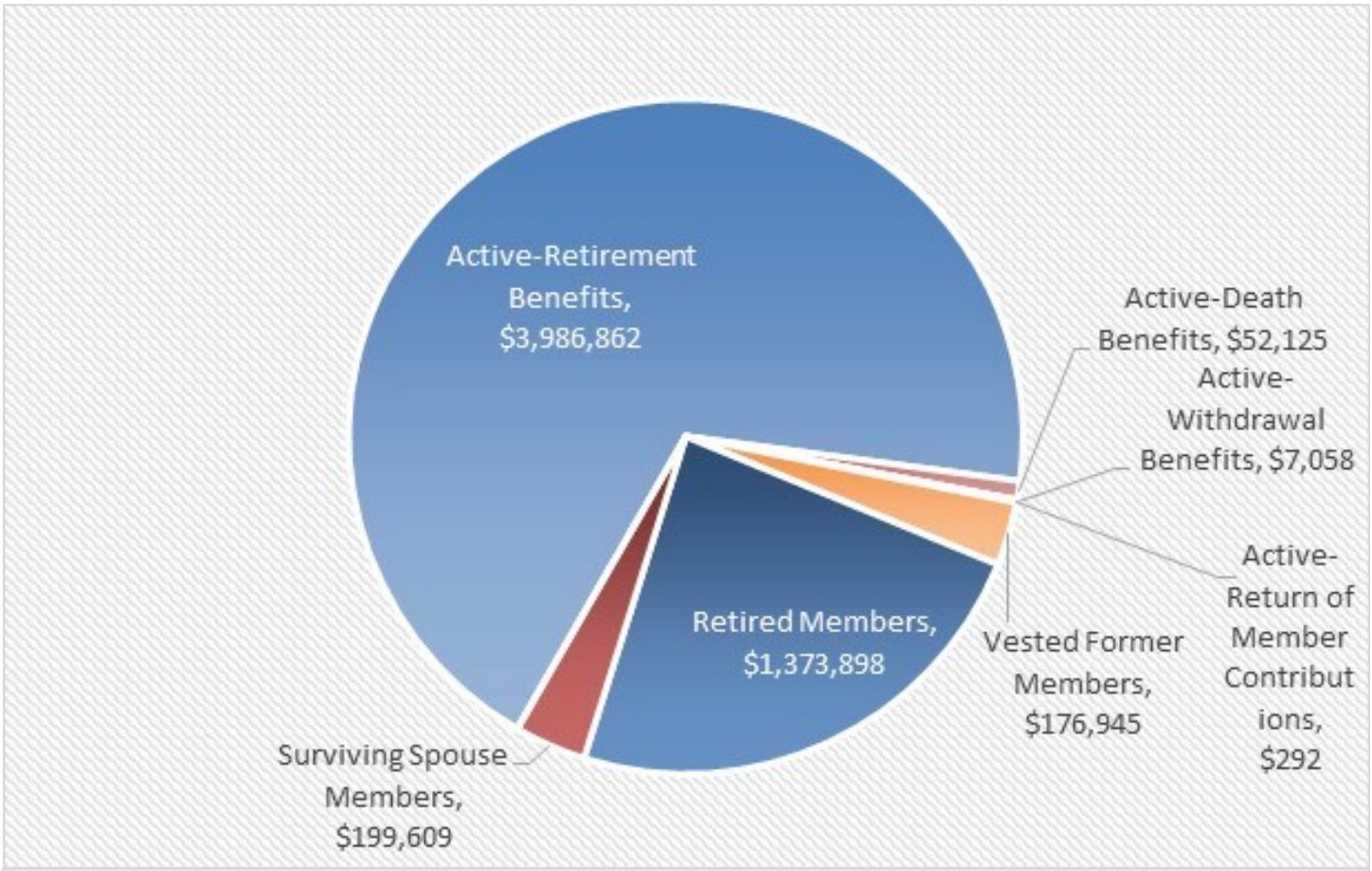
Actuarial Valuation as of January 1, 2019

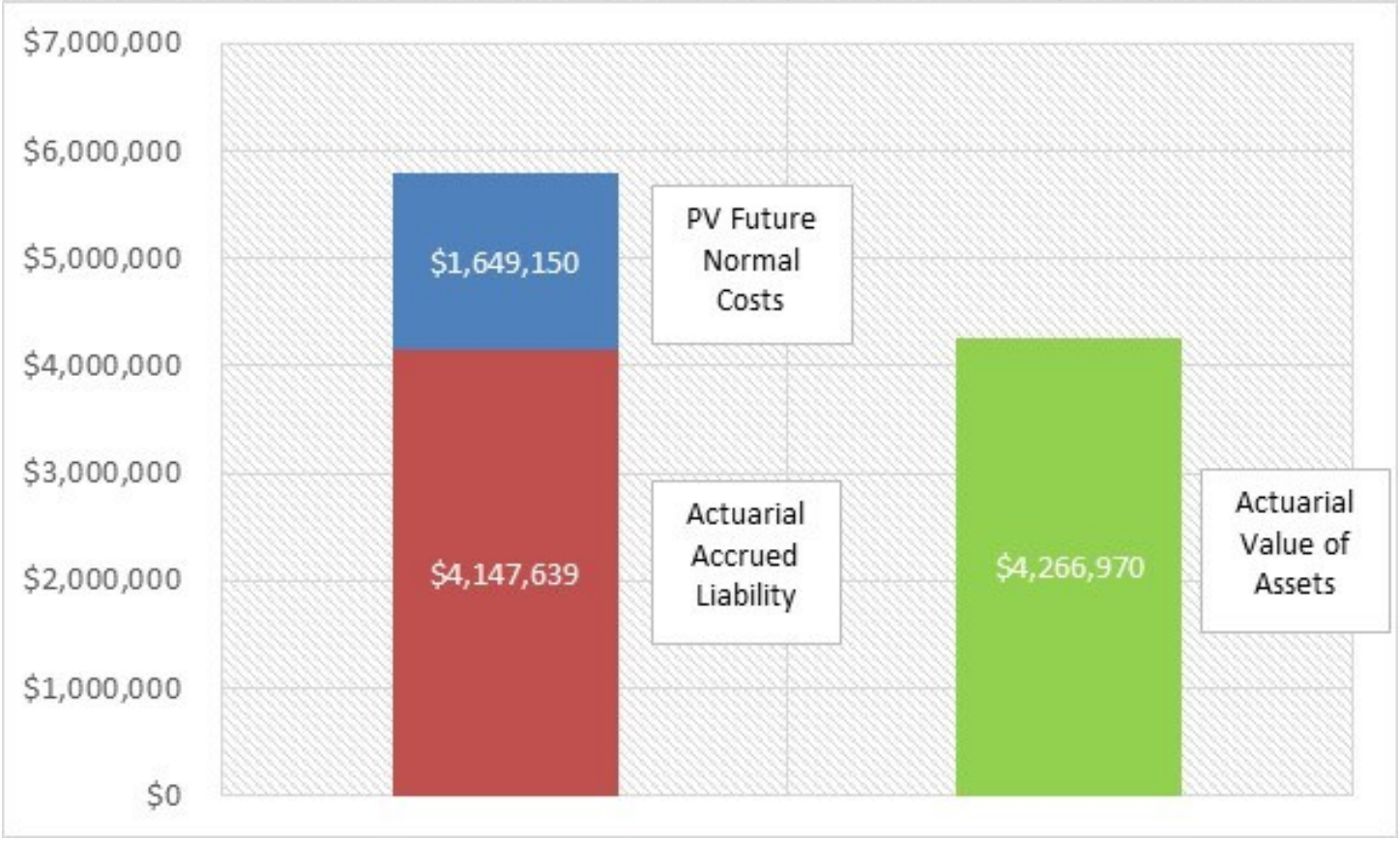




East Lampeter Township Defined Benefit Plan

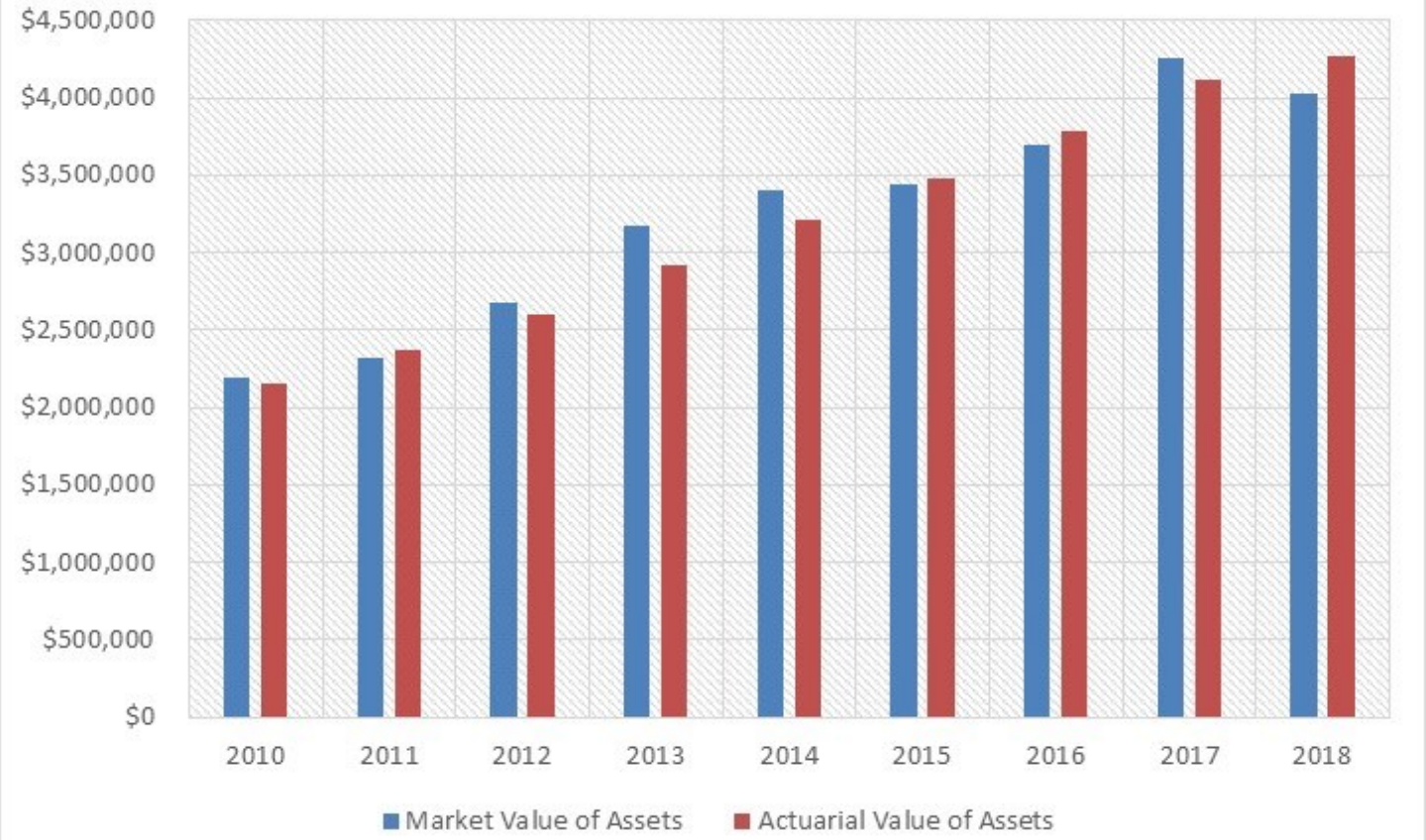
Actuarial Valuation as of January 1, 2019

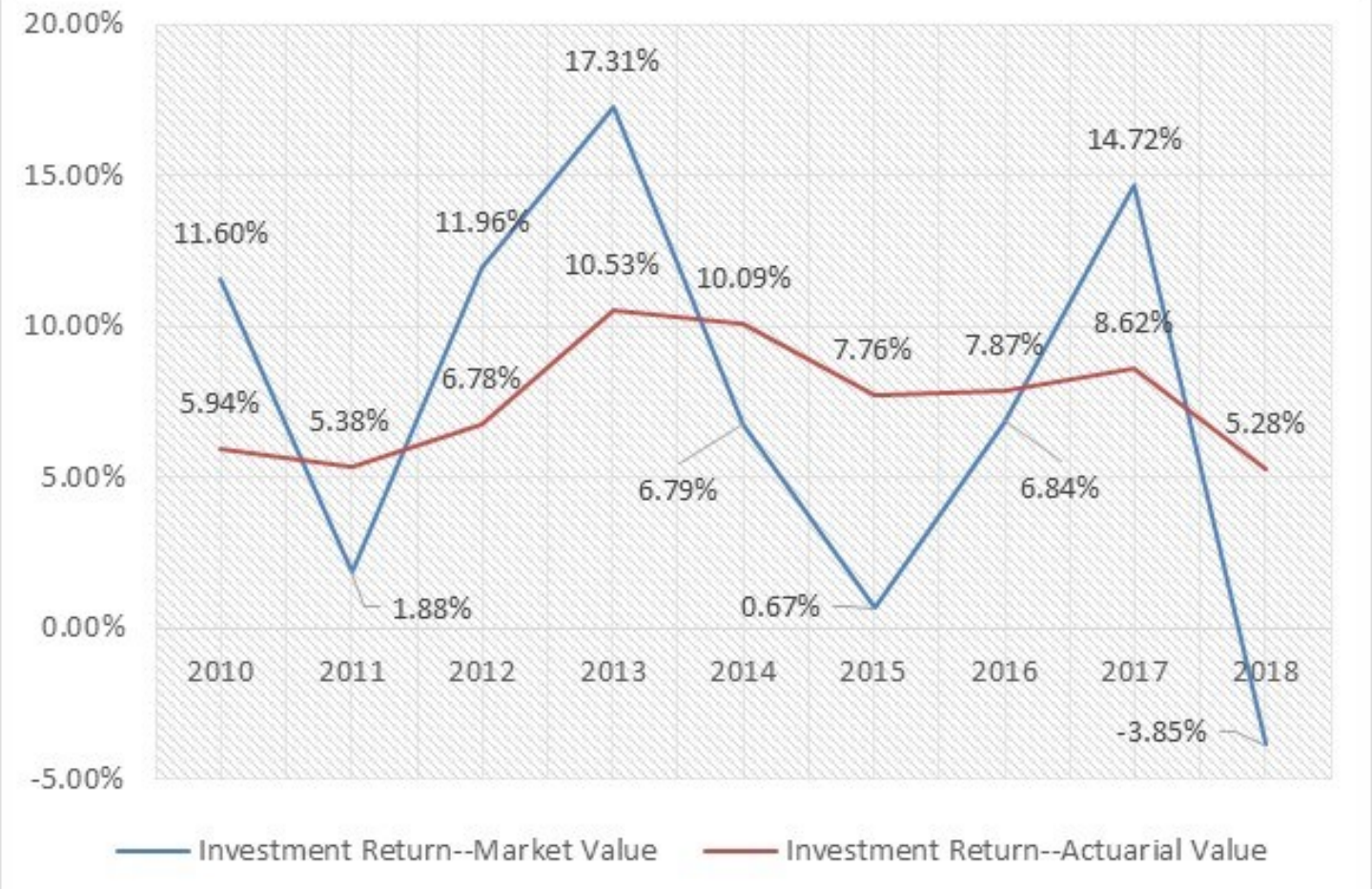




East Lampeter Township Defined Benefit Plan

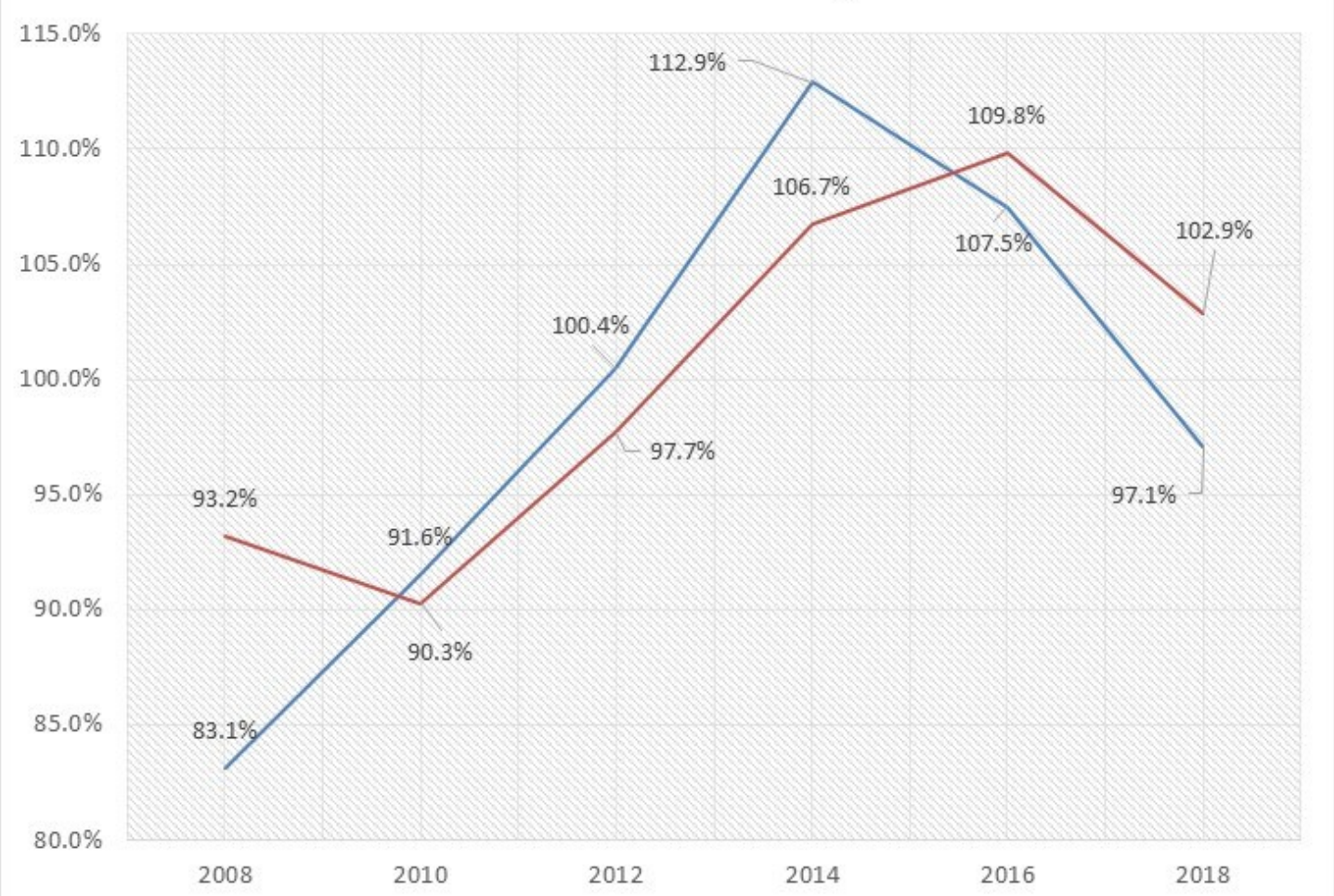
Actuarial Valuation as of January 1, 2019

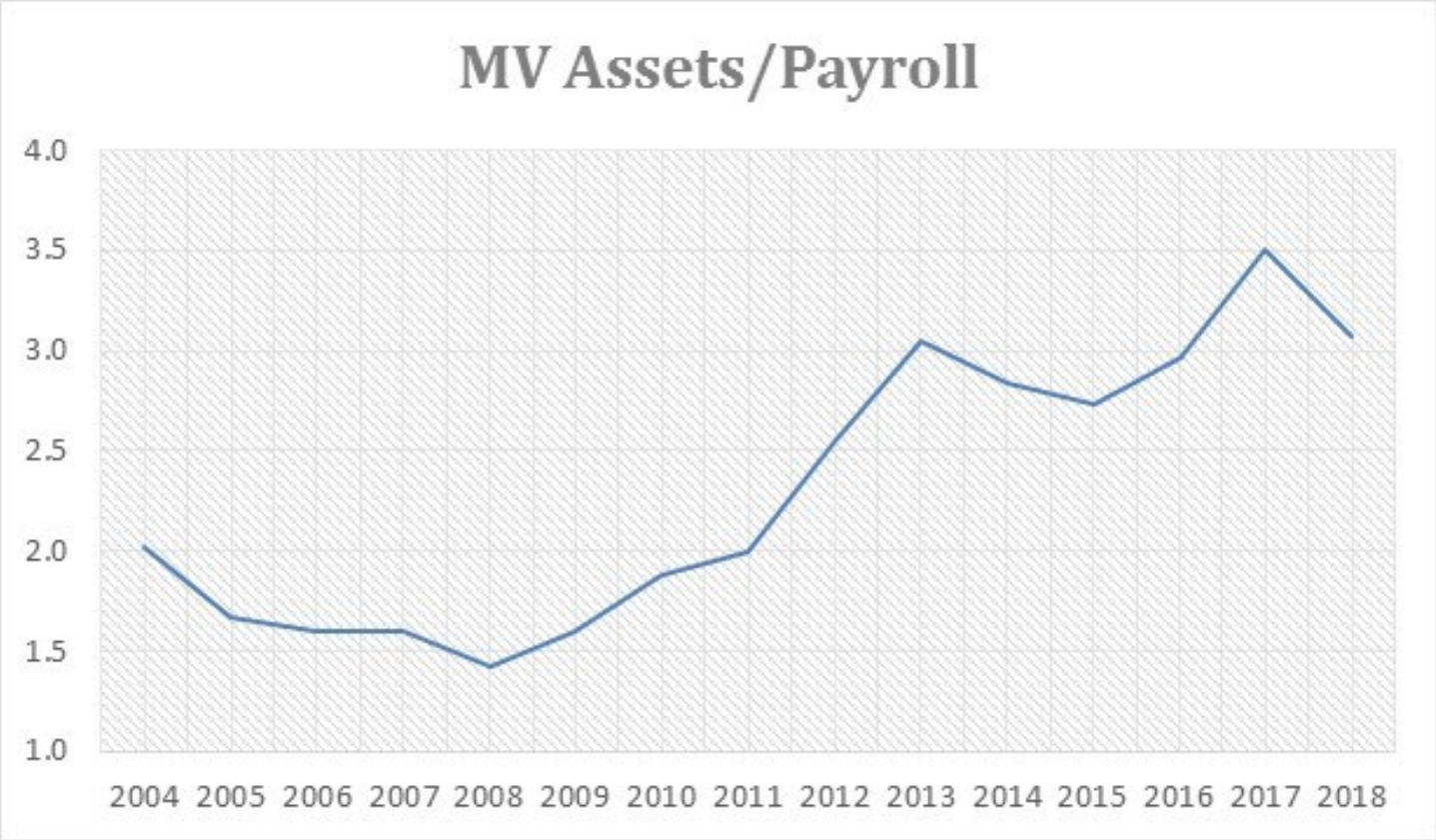


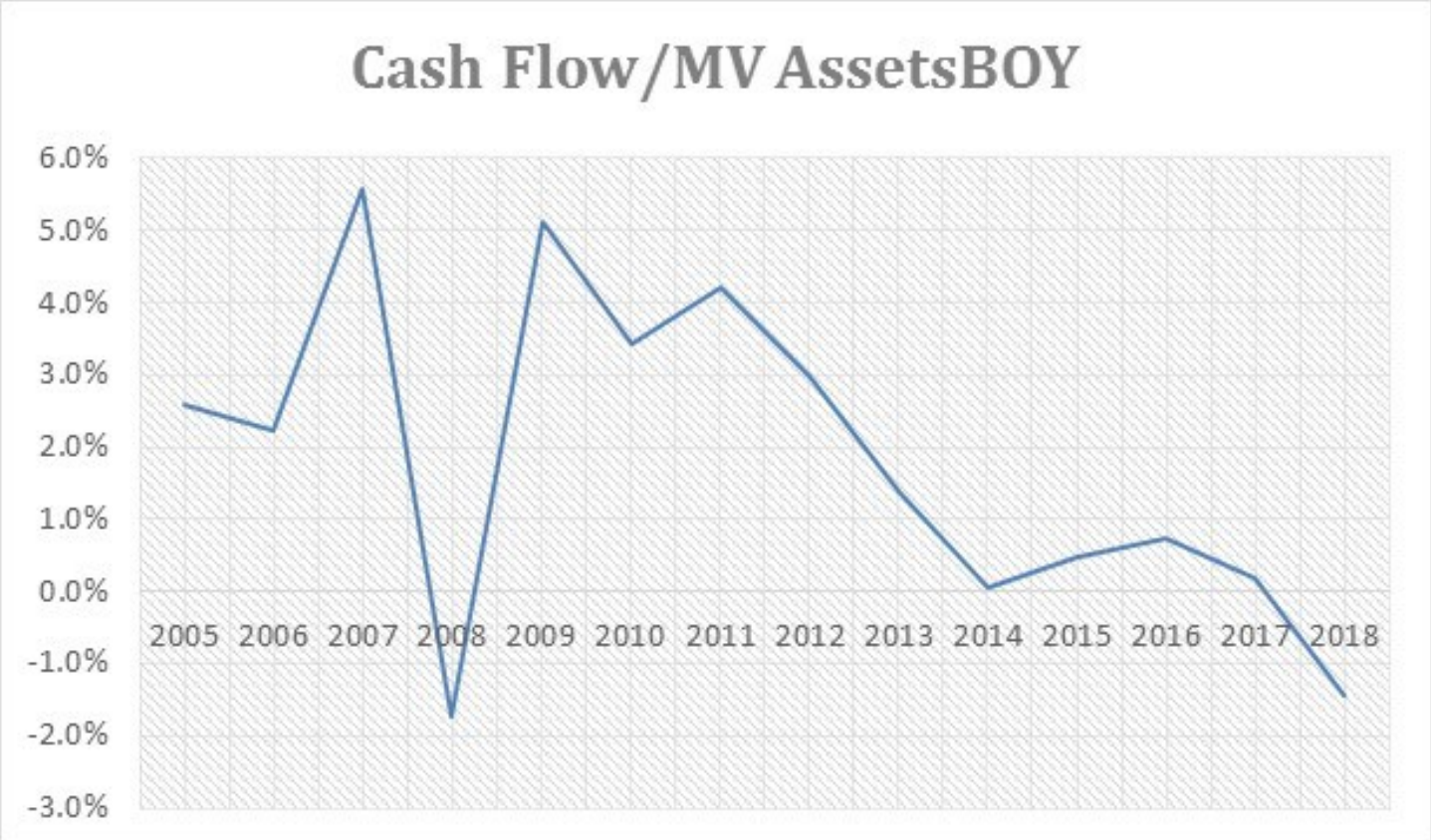


East Lampeter Township Defined Benefit Plan

Actuarial Valuation as of January 1, 2019




MV Assets/Payroll
4.0
3.5
3.0
2.5
2.0
1.5
1.0
2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018


Cash Flow/MV AssetsBOY
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
-1.0%
-2.0%
-3.0%
2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018

East Lampeter Township Defined Benefit Plan
Active Members as of January 1, 2019

		Dates				Service					Accrued	Monthly	Accumulated Member Contributions	
Name	Sex	Birth	Hire	Entry	Retirement	Past Vesting	Past Benefit	Future Benefit	Total Benefit	Current Pay	Monthly Pension	Pension at Ret.	w/o int.	w/ int.
Bitts, Anthony S.	M	10/14/1969	7/10/2006	12/31/2007	11/1/2034	12	11.0000	15.8333	26.8333	62,672	1,057	2,663	16,415.97	21,194.46
Bresch, Troy W.	M	10/29/1973	4/12/2004	1/1/2005	11/1/2038	15	14.0000	19.8333	33.8333	64,724	1,348	3,236	16,903.16	21,974.90
Brooks, John L.	M	5/14/1962	6/5/1995	1/1/1996	6/1/2027	24	23.0000	8.4167	31.4167	68,339	2,368	3,354	18,506.27	24,220.35
Frankford Jr., Larry G.	M	8/20/1969	2/26/2001	1/1/2002	9/1/2034	18	17.0000	15.6667	32.6667	66,668	1,714	3,333	18,064.89	23,617.23
Good, Derek K.	M	8/18/1994	5/29/2018	12/31/2018	9/1/2059	1	0.0000	40.6667	40.6667	20,046	0	1,691	126.77	126.77
Hair, Alecia J.	F	7/22/1984	10/24/2016	12/31/2017	8/1/2049	2	1.0000	30.5833	31.5833	33,390	40	1,318	1,545.28	1,598.06
Hershey, Dwight A.	M	9/18/1967	6/11/2014	12/31/2014	10/1/2032	5	4.0000	13.7500	17.7500	49,946	220	1,108	5,090.30	5,561.27
Hillegas, Keith M.	M	7/3/1970	6/9/2014	12/31/2014	8/1/2035	5	4.0000	16.5833	20.5833	48,293	216	1,243	5,020.28	5,482.35
Hitchens, Tara	F	12/21/1973	3/12/2013	12/31/2013	1/1/2039	6	5.0000	20.0000	25.0000	67,044	504	2,654	9,542.45	10,753.29
Hostetter, Kevin L.	M	1/28/1964	9/25/2017	1/1/2019	2/1/2029	1	0.0000	10.0833	10.0833	74,433	0	930	965.25	965.25
Hutchison, Ralph M.	M	7/4/1960	12/2/1991	1/1/1993	8/1/2025	27	26.0000	6.5833	32.5833	122,840	4,795	6,142	31,473.65	40,799.00
Martin, Lashawnda R.	F	6/24/1976	3/12/2018	12/31/2018	7/1/2041	1	0.0000	22.5000	22.5000	25,750	0	879	193.75	193.75
McPhail, Mark D.	M	12/28/1970	2/26/2001	1/1/2002	1/1/2036	18	17.0000	17.0000	34.0000	63,138	1,634	3,157	17,232.63	22,506.41
Noll, Amanda L.	F	10/21/1982	3/5/2018	12/31/2018	11/1/2047	1	0.0000	28.8333	28.8333	27,043	0	1,181	200.69	200.69
Race, Daniel A.	M	3/24/1965	4/4/2005	1/1/2006	4/1/2030	14	13.0000	11.2500	24.2500	63,020	1,243	2,395	16,545.76	21,429.16
Reath, Gina L.	F	5/26/1957	1/31/2000	1/1/2001	6/1/2022	19	18.0000	3.4167	21.4167	39,429	1,074	1,306	10,888.89	14,261.10
Rhine Jr., William M.	M	10/11/1965	2/14/2005	1/1/2006	11/1/2030	14	13.0000	11.8333	24.8333	62,978	1,252	2,476	16,695.65	21,630.15
Shenk, Cindy E.	F	3/19/1957	1/13/1992	1/1/1993	4/1/2022	27	26.0000	3.2500	29.2500	34,899	1,364	1,593	9,575.87	12,543.06
Shirk, Jeffrey W.	M	8/21/1973	6/23/2008	12/31/2008	9/1/2038	11	10.0000	19.6667	29.6667	64,853	906	3,046	13,458.87	16,773.27
Sinopoli, David	M	2/8/1966	4/10/2006	1/1/2007	3/1/2031	13	12.0000	12.1667	24.1667	52,092	910	1,980	13,229.38	17,202.29
Thomas, Charles H.	M	6/18/1965	7/19/2004	1/1/2006	7/1/2030	14	13.0000	11.5000	24.5000	82,878	1,613	3,149	22,051.57	28,751.86
Timmins, Michael B.	M	2/13/1987	6/18/2018	12/31/2018	3/1/2052	1	0.0000	33.1667	33.1667	18,306	0	1,403	111.29	111.29
Treier, Katherine G.	F	1/9/1952	9/7/1999	1/1/2001	1/1/2019	19	18.0000	0.0000	18.0000	48,206	1,285	1,285	12,831.42	16,749.16
Wasilewski, Alexander J.	M	4/11/1989	5/22/2017	12/31/2017	5/1/2054	2	1.0000	35.3333	36.3333	32,370	42	1,457	1,093.05	1,123.50
Watkins, Ricky J.	M	11/21/1977	6/18/2018	12/31/2018	12/1/2042	1	0.0000	23.9167	23.9167	18,519	0	1,029	112.70	112.70
Totals										1,311,877	23,585	54,008	257,875.79	329,881.32

East Lampeter Township Defined Benefit Plan
Vested Former Members as of January 1, 2019

Name	Sex	Age	Retirement Age	Dates				Monthly Pension	Pension Form
				Birth	Hire	Termination	Retirement		
Amway, Anita L.	F	57	65	11/4/1961	5/5/2008	10/4/2013	12/1/2026	$172.04	Life
Beyer, Jay L.	M	59	65	6/14/1960	2/10/1997	10/15/2005	7/1/2025	497.06	Life
Burkey, Renee L.	F	57	65	4/20/1962	4/8/1982	10/5/1995	5/1/2027	419.25	Life
Fritz, Tracey A.	F	60	65	5/29/1959	7/7/2008	10/19/2016	6/1/2024	315.26	Life
Miller, Jill D.	F	54	65	2/11/1965	4/9/1992	8/18/1999	3/1/2030	245.61	Life
Nelson, Jeanne S.	F	48	65	9/12/1970	1/1/2014	10/27/2017	10/1/2035	23.24	Life
Wile, Rodney Scott	M	53	65	10/4/1965	2/22/2005	4/11/2018	11/1/2030	838.87	Life
Totals								$2,511.33	

East Lampeter Township Defined Benefit Plan
Retired Members as of January 1, 2019

Name	Sex	Ret. Type[1]	Annuity Code[2]	Age	Dates				Monthly Pension	Pension Form
					Birth	Hire	Retirement	Spouse Birth		
Eshleman, C. Leroy	M			70	2/6/1949	5/1/1975	1/1/2010		$1,834.09	Life
Glick, Jeanne L.	F			71	5/9/1948	5/1/1975	11/1/2017		1,255.42	Life
Graybill, Clyde R.	M			73	4/28/1946		5/1/2011	8/27/1963	840.73	J & 100% Surv.
Hohenwarter, Helen L.	F			79	8/9/1939	8/8/1999	1/1/2005	1/13/1938	1,013.15	J & 50% Surv.
Kreider, Betsy A.	F			79	6/22/1940		1/1/2006	12/18/1940	175.03	J & 50% Surv.
Kreider, H Laverne	F		A	82	3/24/1937		4/1/1993		329.16	Life
Kreider, Susan	F			73	8/22/1945		3/1/2012		214.43	Life
Latschar, Russell E.	M			83	7/28/1935		9/1/2000		108.00	Life
Mcfalls, Ronald L.	M			63	8/8/1955		1/1/2019	12/30/1953	1,461.05	J & 67% Surv.
Millhouse, L. Dennis	M			71	11/10/1947		1/1/2014		760.68	Life
Reiff, Cynthia	F	S		59	9/29/1959		4/1/2020		977.38	Life
Shutter, Shirley M.	F	S	A	81	8/28/1937		1/1/1996		321.77	Life
Silcox, Ann I.	F			68	8/15/1950		4/1/2017		1,165.80	Life
Sydnor, Sandra L.	F	S		59	11/22/1959		2/1/2005		544.99	Life
Weaver, Jr., William H.	M			63	6/22/1956		6/1/2014	12/11/1993	439.81	J & 100% Surv.
Windle, Marianne	F			57	5/24/1962		7/1/2018		573.05	Life
Young, R. Lee	M			71	11/25/1947		5/1/2013	11/3/1980	1,047.34	J & 67% Surv.
Total									$13,061.88	

[1] Retirement Type: S = Surviving Spouse Pension

[2] Annuity Code: A = Annuity purchased to pay entire monthly pension.