

# January 1, 2018 Actuarial Valuation of the City of Fort Collins General Employees' Retirement Plan

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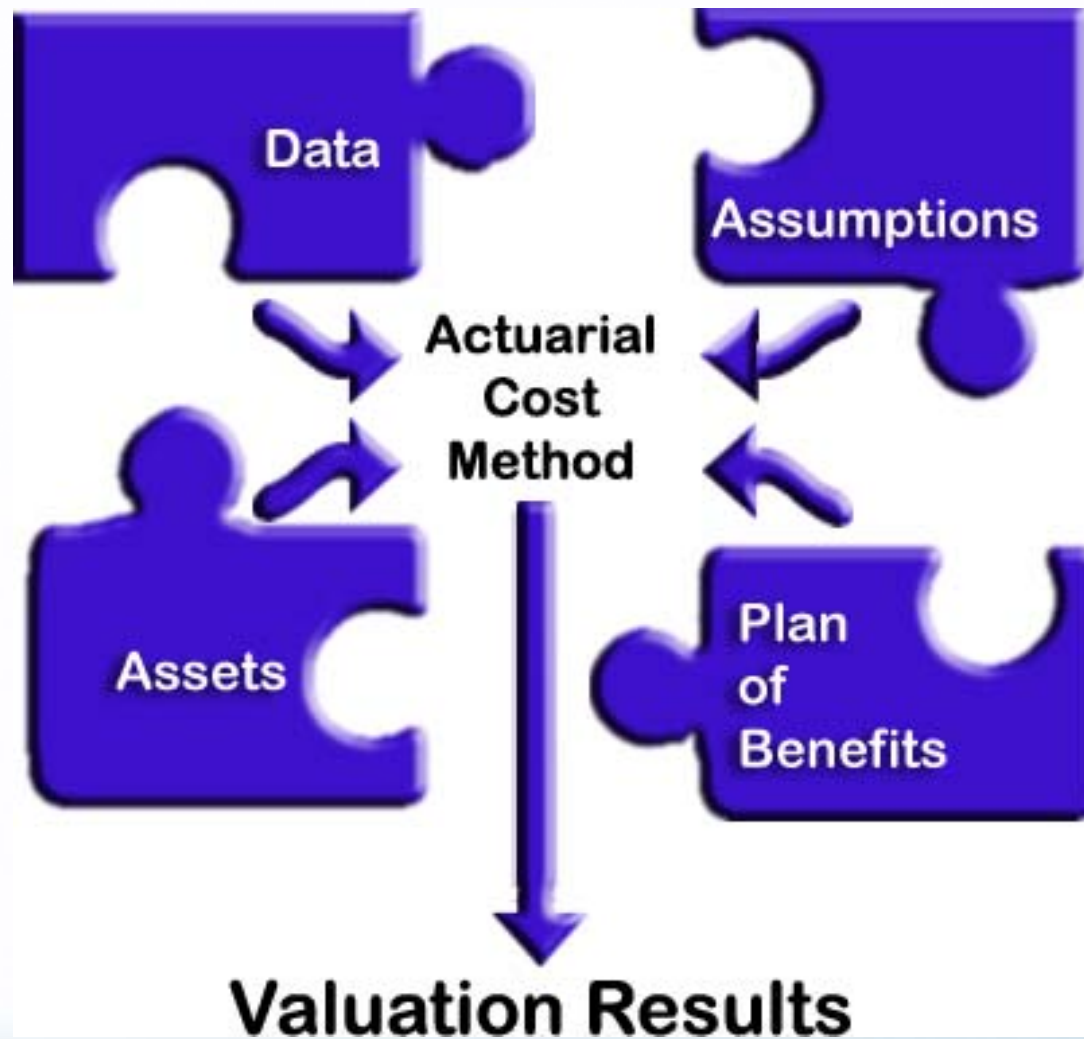
# Agenda

- Purpose of a Valuation
- Pension Valuation Elements
  - Plan Data
  - Member Data
  - Financial Data
- Review Liabilities
- Overview of Results
- Funding Analysis (Resources vs. Obligations)
- Solvency Projections

# Purposes of the Valuation

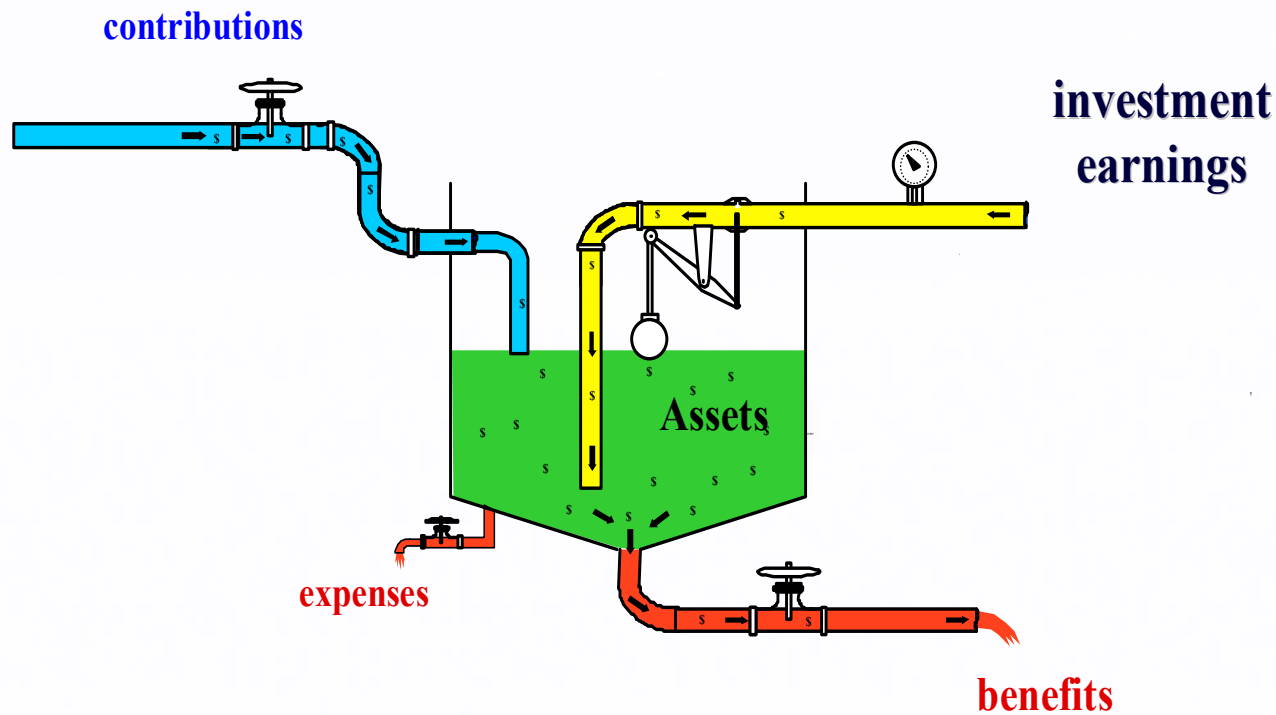
- Review demographic and financial experience
- Determine the funded status of the plan
- Measure adequacy of the plan's funding policy
- Provide financial reporting information pursuant to accounting standards

# The Necessary Elements of a Valuation



# Pension Plan Equation

- Assumptions do affect calculated rates and liabilities
- Assumptions do not affect the plan's long-term contribution cost



The illustration above represents the financial functioning of a pension trust. Ultimately, all benefits and expenses must be provided for by current assets, future contributions and future investment returns.

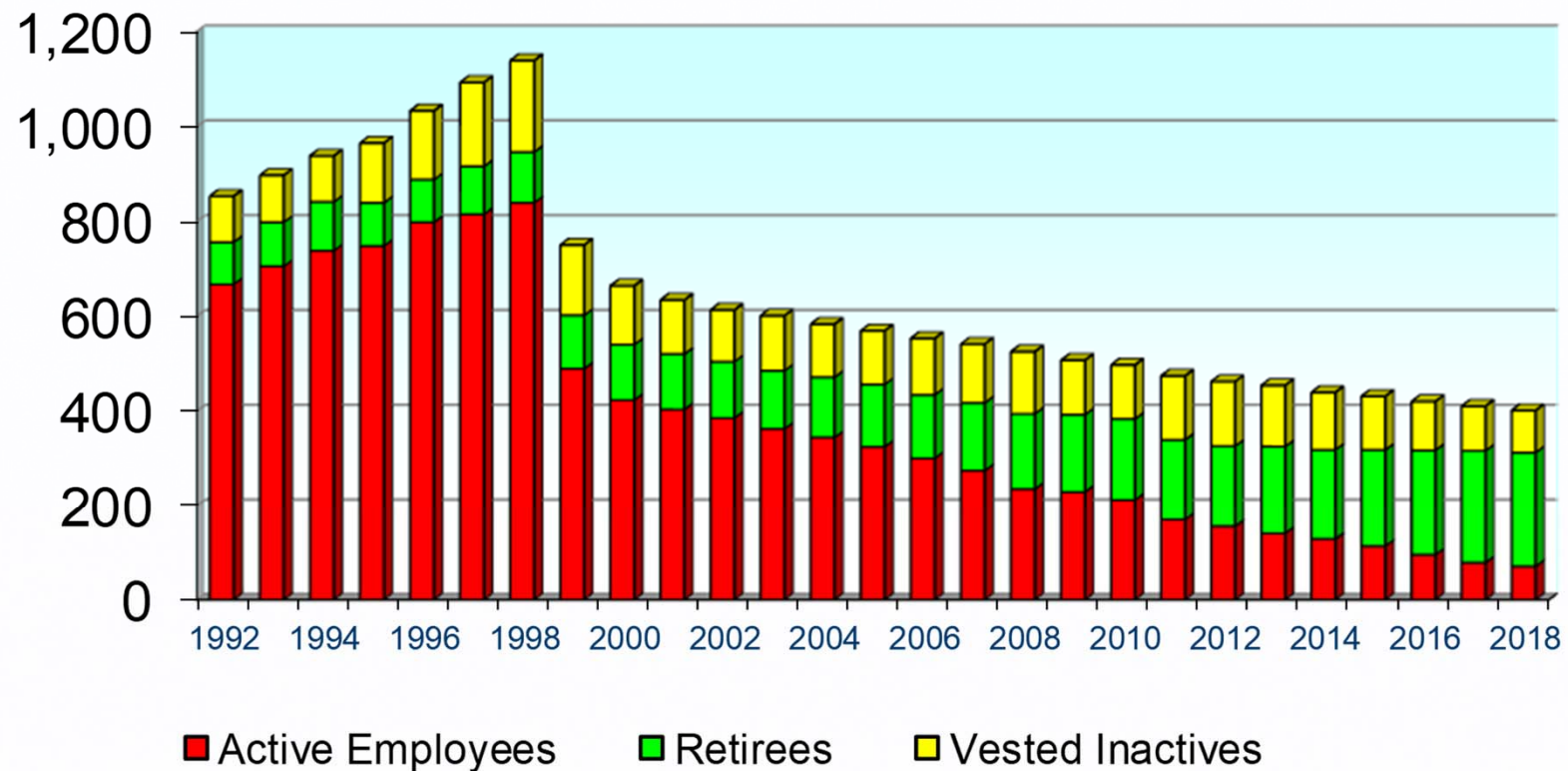
# Summary of Plan Provisions

- Retirement Benefit Formula
  - $1.5\% \times \text{Average Compensation} \times \text{Credited Service}$
- Average Compensation
  - 60 Month Average of Annualized Compensation
- Credited Service
  - $\text{Hours Worked in a plan year} \div 2,080$
- Normal Form of Payment – Life Annuity
  - Other optional forms available, including single sum payment
- Normal Retirement Age – 65
- Early Retirement Age – 55
  - (Benefit Reduced for Earlier Commencement)

# Data Reconciliation

	Actives	Term Vested	Retired	Total
1/1/2017	78	94	238	410
Rehire	N/A	N/A	N/A	0
Terminations	0	0	N/A	0
Retirements	(8)	(1)	9	0
Deaths	0	0	(5)	(5)
Cash Outs	0	(4)	0	(4)
Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Net Change	(8)	(5)	4	(9)
1/1/2018	70	89	242	401

# Summary of Plan Participants

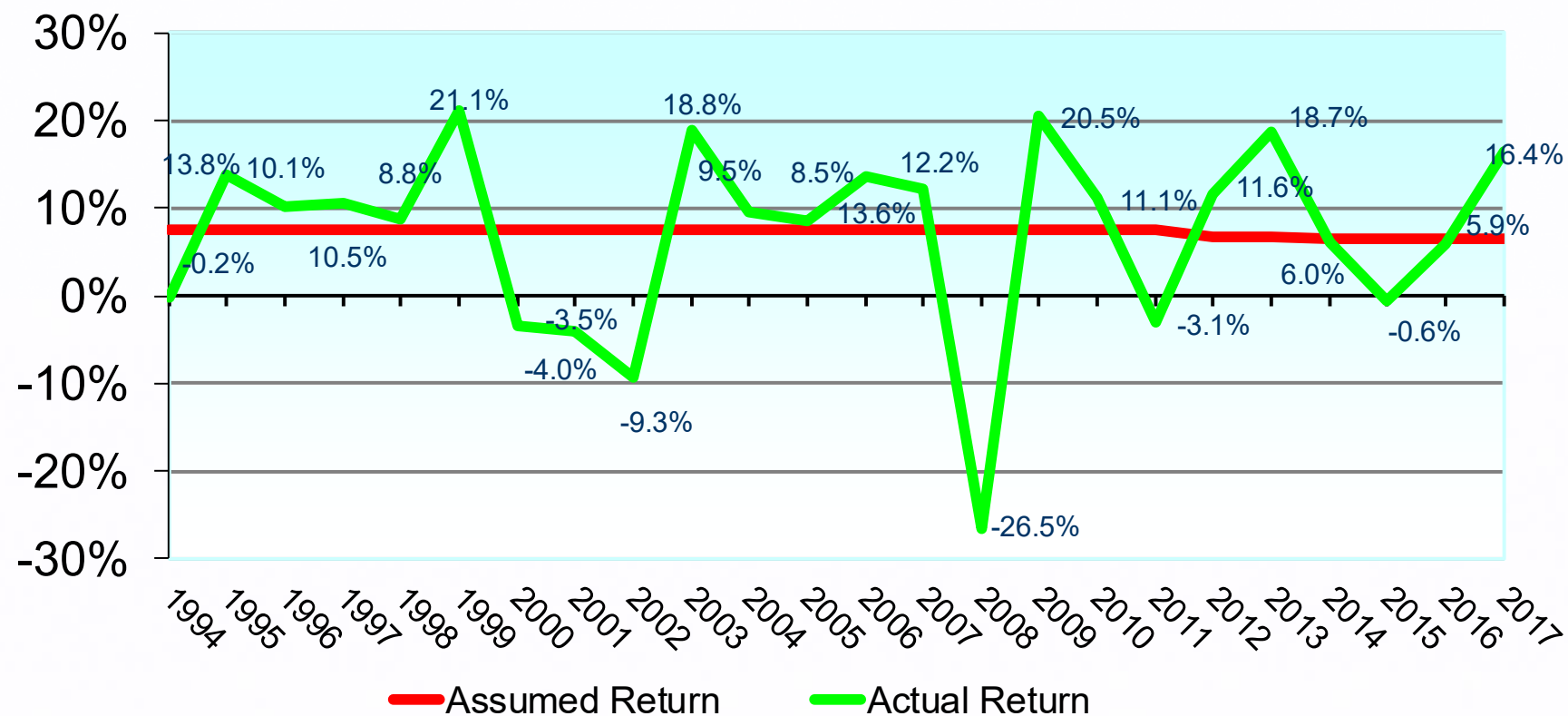




# Financial Data - 2017

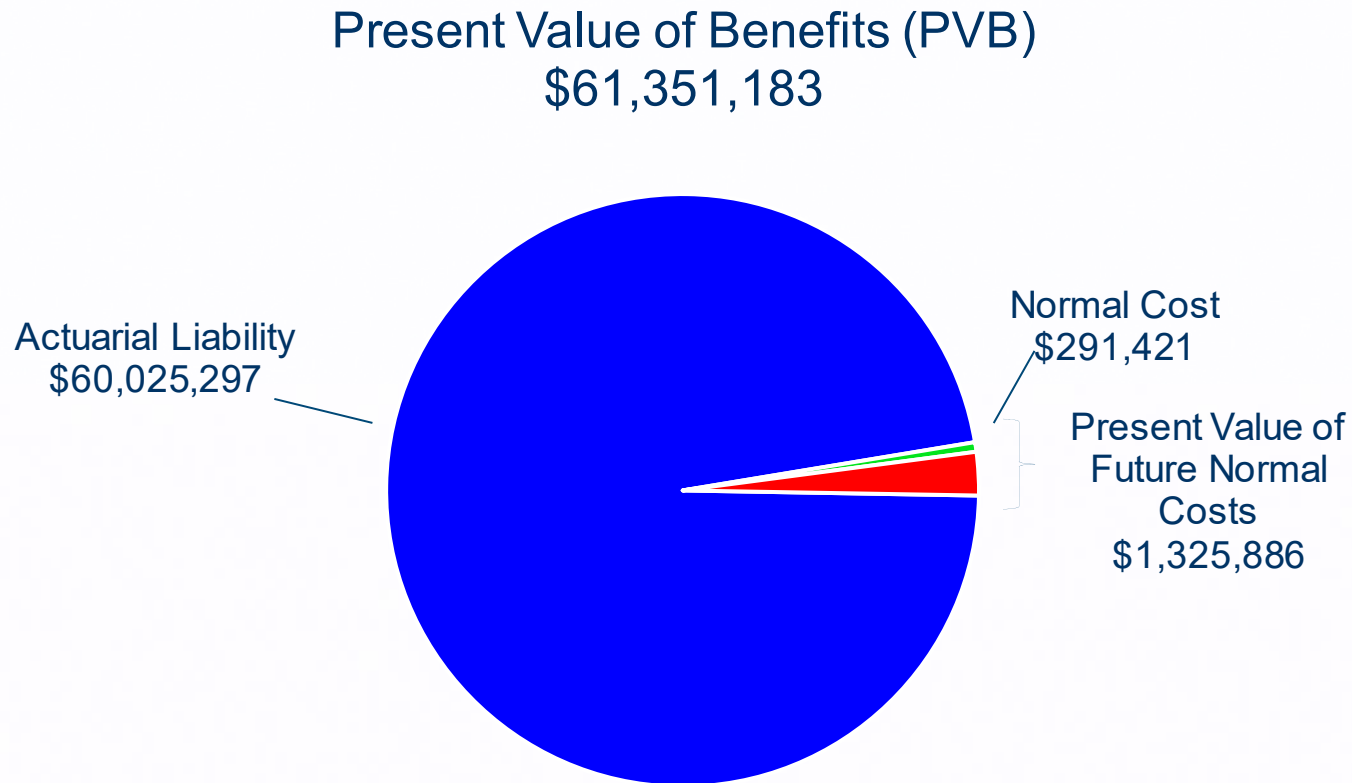
1. Market Value of Assets – 1/1/2017	\$	43,869,306
2. Income		
a. Contributions	\$	1,652,786
b. Income and appreciation		<u>7,032,711</u>
c. Total	\$	8,685,497
3. Disbursements		
a. Monthly benefits	\$	3,422,656
b. Lump sum payments		297,666
c. Expenses		<u>26,752</u>
d. Total	\$	3,747,074
4. Net Increase/(Decrease)	\$	4,938,423
5. Market Value of Assets – 1/1/2018	\$	48,807,729

# Return on Market Value of Assets Net of Investment Expenses\*

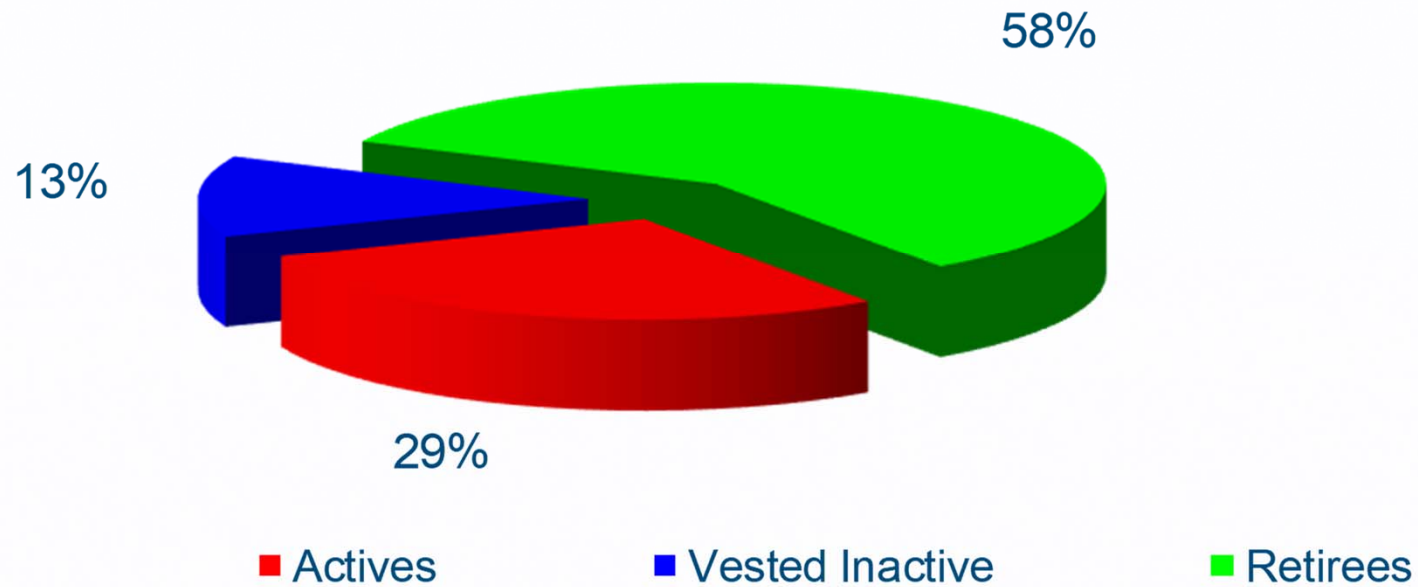


\*Net of all expenses prior to 2014

# Entry Age Normal Cost Method



# Actuarial Liability



# Overview of Results - Funding

	2017	2018
1. Market Value (MV) of Assets	\$ 43,869,306	\$ 48,807,729
2. Return on MV (Prior Year)	5.9%	16.4%
3. Discount Rate for Liabilities	6.50%	6.25%
4. Present Value of Future Benefits	\$ 59,794,045	\$ 61,351,183
5. Actuarial Liability (AL)	\$ 58,377,767	\$ 60,025,297
6. Unfunded Actuarial Liability AL - MV	\$ 14,508,461	\$ 11,217,568
7. Funded Ratio MV ÷ AL	75.15%	81.31%
8. Normal Cost + Expenses (as a % of Payroll)	\$ 337,415 6.42%	\$ 318,155 6.71%
9. Years of Supplement to Amortize Unfunded Liab.	22	14

# Overview – GASB 67/68 Disclosure Information

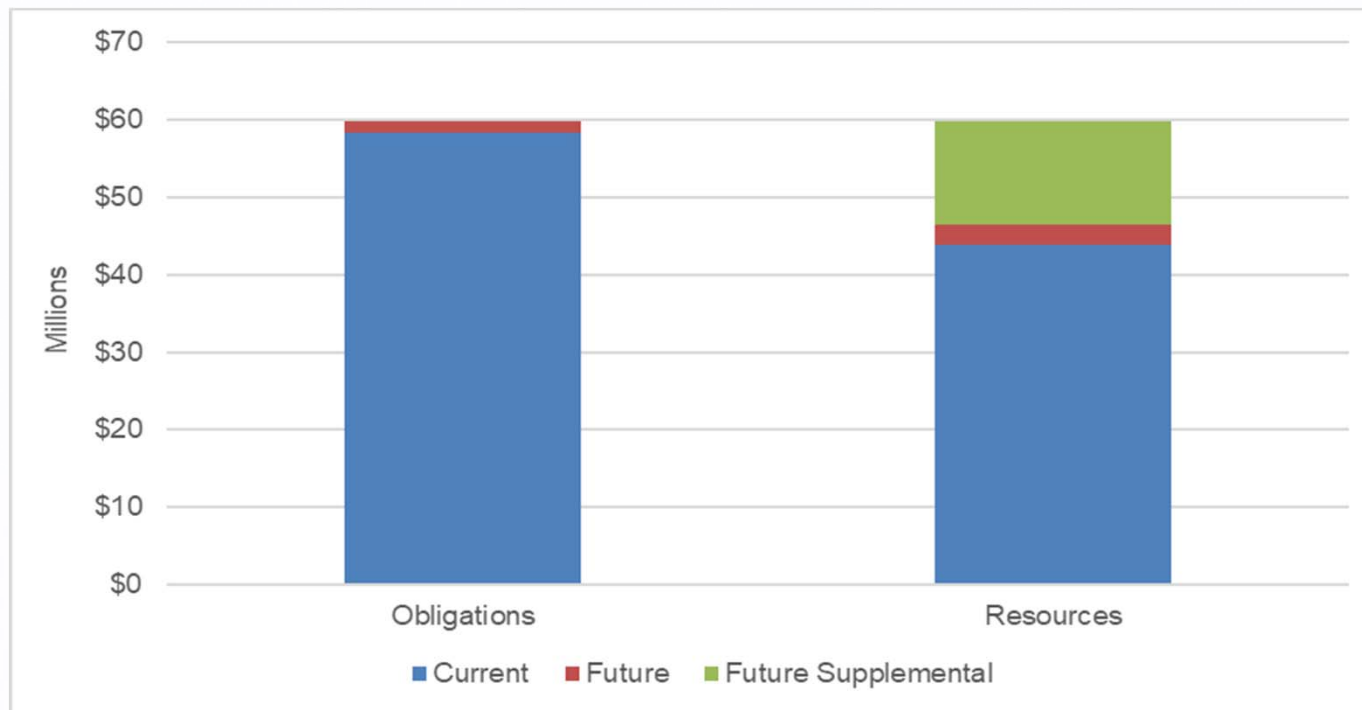
	12/31/2016	12/31/2017
Discount Rate for Liability	6.50%	6.25%
8. Total Pension Liability (TPL)	\$ 58,377,767	\$ 60,025,297
9. Fiduciary Net Position (FNP)	\$ 43,869,306	\$ 48,807,729
10. Net Pension Liability (NPL)	\$ 14,508,461	\$ 11,217,568
11. FNP as a % of TPL	75.15%	81.31%

- Total Pension Liability is calculated using a discount rate of 6.25%, the Plan's long-term expected rate of return assumption
- The use of the long-term expected rate of return assumption is based on Plan's Depletion Date Projection, which takes into account the current Fiduciary Net Position, projected net cash flow, and reliance on the adopted policy of supplemental contributions. If the Plan were projected to run out of money the Total Pension Liability would be calculated using a blended discount rate incorporating the current rates of 20-year tax-exempt municipal bonds. The 20-year Muni Bond rate was 3.44% at 12/31/2017.
- The Depletion Date Projection is reviewed annually based on factors such as the current Fiduciary Net Position and future anticipated level of contributions.

## Gain/Loss

1. Actual UAL, 1/1/2017	\$ 14,508,461
2. Expected changes during 2017	<u>(401,349)</u>
3. Expected UAL, 1/1/2018	\$ 14,107,112
Changes:	
4. Asset (gain)/loss	\$ (4,248,199)
5. Salary change different than assumed	(249,594)
6. Pensioner Mortality Experience	158,360
7. Retirement and other terminations	64,593
8. Other demographic	48,010
9. Investment Return Assumption Change	<u>1,337,286</u>
10. Total	\$ (2,889,544)
11. Actual UAL, 1/1/2018	\$ 11,217,568

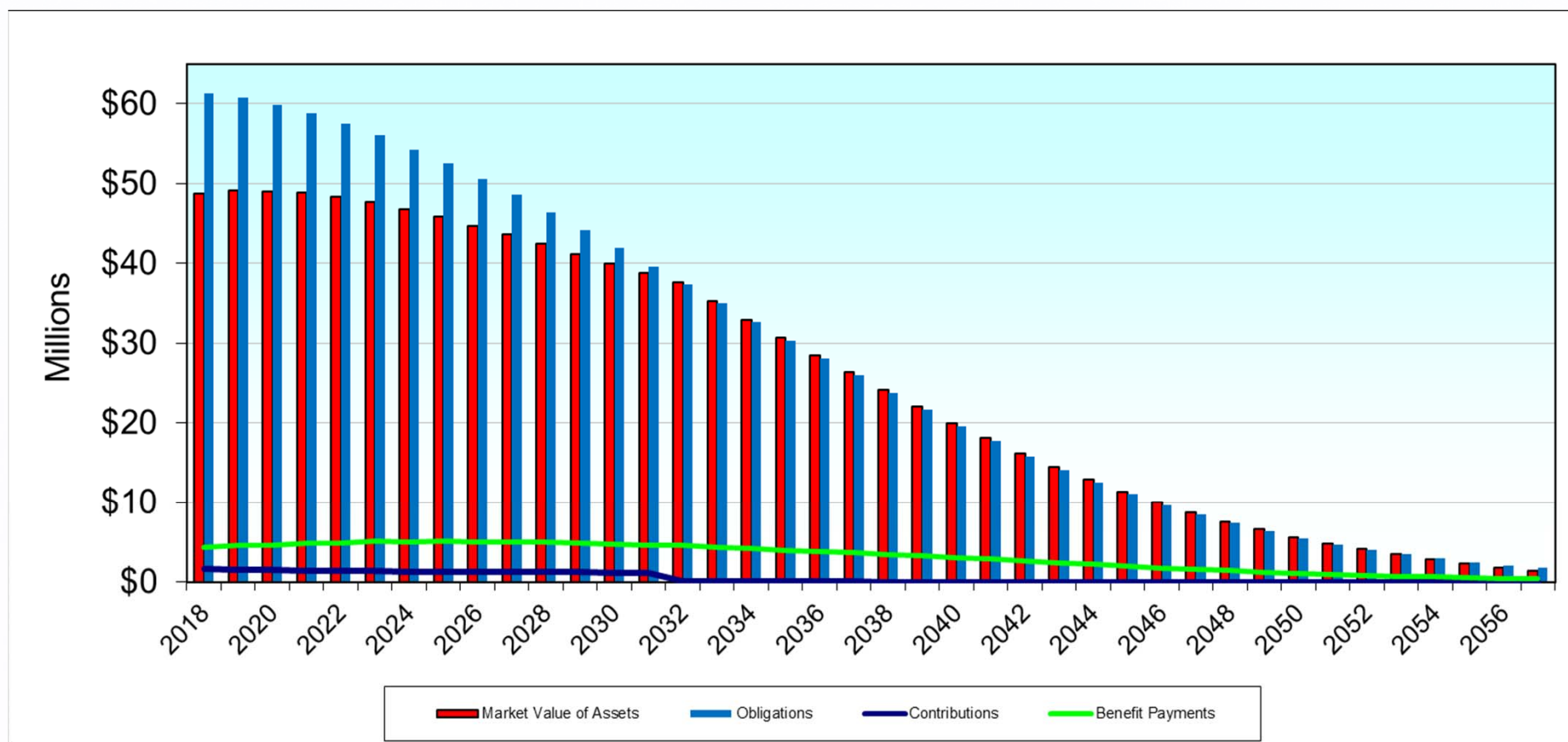
# Summary of Resources and Obligations



- Obligations consist of the Actuarial Liability (Current) and the amount of the total liability attributable to future service, the Present Value of Future Normal Costs (Future)
- Resources consist of the current market value of assets (Current) and the present value of the future anticipated payroll contributions of 10.5% of compensation (Future)
- The difference of \$10.3 million is the amount anticipated to be funded through the supplemental contribution of \$1.12 million per year. This equates to about 14 years as of the valuation date.



# Projection of Contributions, Benefit Payments, Obligations and Market Value of Assets



Assumes Market Value of Assets earns 6.25% per annum, and payroll contributions are 10.5% of compensation. Includes excess contributions of \$1,120,000 for 2018- 2031.

# Projection of Contributions, Benefit Payments, Obligations and Market Value of Assets (\$millions)

Year	Market Value	Obligations	Expected Contribution	Benefit Payment	Year	Market Value	Obligations	Expected Contribution	Benefit Payment
2018	48.81	61.35	1.62	4.28	2038	24.14	23.74	0.01	3.48
2019	49.09	60.76	1.54	4.55	2039	22.03	21.62	0.01	3.26
2020	49.02	59.85	1.46	4.58	2040	20.01	19.61	0.01	3.04
2021	48.85	58.86	1.42	4.86	2041	18.09	17.69	0.01	2.86
2022	48.33	57.51	1.37	4.88	2042	16.22	15.84	0.00	2.62
2023	47.69	56.06	1.33	5.09	2043	14.48	14.11	0.00	2.40
2024	46.77	54.30	1.29	5.00	2044	12.87	12.51	0.00	2.18
2025	45.83	52.52	1.27	5.06	2045	11.37	11.04	0.00	1.97
2026	44.75	50.57	1.25	4.99	2046	9.99	9.69	0.00	1.77
2027	43.66	48.57	1.23	5.05	2047	8.73	8.46	0.00	1.58
2028	42.42	46.38	1.21	4.94	2048	7.59	7.36	0.00	1.40
2029	41.19	44.18	1.20	4.88	2049	6.56	6.37	0.00	1.24
2030	39.94	41.89	1.19	4.71	2050	5.64	5.49	0.00	1.08
2031	38.76	39.64	1.18	4.63	2051	4.81	4.71	0.00	0.95
2032	37.59	37.33	0.05	4.54	2052	4.08	4.02	0.00	0.82
2033	35.27	34.97	0.04	4.37	2053	3.42	3.42	0.00	0.71
2034	32.97	32.63	0.03	4.17	2054	2.83	2.90	0.00	0.61
2035	30.72	30.36	0.03	3.98	2055	2.31	2.45	0.00	0.53
2036	28.52	28.14	0.02	3.84	2056	1.84	2.06	0.00	0.45
2037	26.32	25.93	0.02	3.68	2057	1.43	1.72	0.00	0.38

Assumes Market Value of Assets earns 6.25% per annum, and payroll contributions are 10.5% of compensation. Includes excess contributions of \$1,120,000 for 2018 - 2031.

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