



GASB 74/75 INTERIM ACTUARIAL VALUATION

Fiscal Year Ending June 30, 2018

CITY OF DOVER

CONTACT

Suraj M. Datta, ASA, MAAA
suraj.datta@nyhart.com

ADDRESS

Nyhart
8415 Allison Pointe Blvd. Suite 300
Indianapolis, IN 46250

PHONE

General (317) 845-3500
Toll-Free (800) 428-7106
Fax (317) 845-3654

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December 20, 2018

**Lori Peddicord
City of Dover
5 E. Reed Street, Suite 300
Dover, DE 19904**

This report summarizes the interim GASB actuarial valuation for the City of Dover 2017/18 fiscal year. To the best of our knowledge, the report presents a fair position of the funded status of the plan in accordance with GASB Statement No. 74 (Financial Reporting for Post-Employment Benefit Plans Other Than Pension Plans) and GASB Statement No. 75 (Accounting and Financial Reporting by Employers for Post-Employment Benefits Other Than Pensions).

The information presented herein is based on the actuarial assumptions and substantive plan provisions summarized in this report and participant information furnished to us by the Plan Sponsor. We have reviewed the employee census provided by the Plan Sponsor for reasonableness when compared to the prior information provided but have not audited the information at the source, and therefore do not accept responsibility for the accuracy or the completeness of the data on which the information is based. When relevant data may be missing, we may have made assumptions we feel are neutral or conservative to the purpose of the measurement. We are not aware of any significant issues with and have relied on the data provided.

The discount rate, other economic assumptions, and demographic assumptions have been selected by the Plan Sponsor with the concurrence of Nyhart. In our opinion, the actuarial assumptions are individually reasonable and in combination represent our estimate of anticipated experience of the Plan. All calculations have been made in accordance with generally accepted actuarial principles and practice.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- plan experience differing from that anticipated by the economic or demographic assumptions;
- changes in economic or demographic assumptions;
- increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- changes in plan provisions or applicable law.

We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement.

To our knowledge, there have been no significant events prior to the current year's measurement date or as of the date of this report that could materially affect the results contained herein.



Neither Nyhart nor any of its employees has any relationship with the plan or its sponsor that could impair or appear to impair the objectivity of this report. Our professional work is in full compliance with the American Academy of Actuaries "Code of Professional Conduct" Precept 7 regarding conflict of interest. The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Should you have any questions please do not hesitate to contact us.

A handwritten signature in black ink that reads "Randy Gomez".

Randy Gomez, FSA, MAAA
Consulting Actuary

A handwritten signature in black ink that reads "Suraj M. Datta".

Suraj M. Datta, ASA, MAAA
Valuation Actuary

Executive Summary

City of Dover Interim GASB 74/75 Valuation for Fiscal Year Ending June 30, 2018

Summary of Results

Presented below is the summary of GASB 75 results for the fiscal year ending June 30, 2018 compared to the prior fiscal year as shown in the City's Notes to Financial Statement.

	As of June 30, 2017	As of June 30, 2018
Total OPEB Liability	\$ 69,305,071	\$ 66,118,639
Actuarial Value of Assets	\$ (29,053,846)	\$ (34,359,162)
Net OPEB Liability	\$ 40,251,225	\$ 31,759,477
Funded Ratio	41.9%	52.0%

	FY 2016/17	FY 2017/18
OPEB Expense	\$ 3,782,913	\$ 384,716
Annual Employer Contributions	\$ 4,602,728	\$ 5,721,795
Actuarially Determined Contribution	\$ 5,429,545	\$ 4,559,852

	As of June 30, 2017	As of June 30, 2018
Discount Rate	6.50%	6.50%
Expected Return on Assets	6.50%	6.50%

GASB Disclosures

City of Dover Interim GASB 74/75 Valuation for Fiscal Year Ending June 30, 2018

Schedule of Changes in Net OPEB Liability and Related Ratios

OPEB Liability	FY 2017/18	FY 2016/17
Total OPEB Liability		
Total OPEB Liability - beginning of year	\$ 69,305,071	\$ 73,334,826
Service cost	1,221,869	1,654,915
Interest	4,497,757	4,681,587
Change of benefit terms	0	0
Changes in assumptions	0	(4,832,943)
Differences between expected and actual experience	(6,202,130)	(2,870,577)
Benefit payments	(2,703,928)	(2,662,737)
Net change in total OPEB liability	\$ (3,186,432)	\$ (4,029,755)
Total OPEB Liability - end of year	\$ 66,118,639	\$ 69,305,071
Plan Fiduciary Net Position		
Plan fiduciary net position - beginning of year	\$ 29,053,846	\$ 24,043,162
Contributions - employer	5,721,795	4,602,728
Contributions - active employees	0	0
Net investment income	2,294,949	3,073,693
Benefit payments	(2,703,928)	(2,662,737)
Trust administrative expenses	(7,500)	(3,000)
Net change in plan fiduciary net position	\$ 5,305,316	\$ 5,010,684
Plan fiduciary net position - end of year	\$ 34,359,162	\$ 29,053,846
Net OPEB Liability - end of year	\$ 31,759,477	\$ 40,251,225
Plan fiduciary net position as % of total OPEB liability	52.0%	41.9%
Covered employee payroll	\$ 19,578,050	\$ 19,100,537
Net OPEB liability as % of covered payroll	162.2%	210.7%

GASB Disclosures

City of Dover Interim GASB 74/75 Valuation for Fiscal Year Ending June 30, 2018

Schedule of Employer Contributions

The Actuarially Determined Contributions (ADC) shown below are based on the Annual Required Contribution (ARC) calculated in prior GASB 45 actuarial valuations as shown in the City's financial statements.

	FY 2017/18	FY 2016/17	FY 2015/16	FY 2014/15	FY 2013/14
Actuarially Determined Contribution (ADC)	\$ 4,559,852	\$ 5,429,545	\$ 5,125,687	\$ 3,809,600	\$ 5,948,442
Contributions in relation to the ADC	5,721,795	4,602,728	3,567,744	5,305,007	5,086,180
Contribution deficiency/(excess)	\$ (1,161,943)	\$ 40,959	\$ 1,557,943	\$ (1,495,407)	\$ 862,262
Covered employee payroll	\$ 19,578,050	\$ 19,100,537	\$ 17,656,880	\$ 17,059,787	\$ 17,521,727
Contribution as a % of covered payroll	29.2%	24.1%	20.2%	31.1%	29.0%

	FY 2012/13	FY 2011/12	FY 2010/11	FY 2009/10	FY 2008/09
Actuarially Determined Contribution (ADC)	\$ 6,098,972	\$ 7,653,379	\$ 7,690,991	\$ 5,891,919	\$ 6,227,825
Contributions in relation to the ADC	4,019,778	5,645,311	3,314,046	1,672,960	6,177,146
Contribution deficiency/(excess)	\$ 2,079,194	\$ 2,008,068	\$ 4,376,945	\$ 4,218,959	\$ 50,679
Covered employee payroll	\$ 17,335,618	\$ 18,500,000	\$ 18,292,104	\$ 18,797,853	\$ 18,162,177
Contribution as a % of covered payroll	23.2%	30.5%	18.1%	8.9%	34.0%

GASB Disclosures

City of Dover Interim GASB 74/75 Valuation for Fiscal Year Ending June 30, 2018

OPEB Expense

OPEB Expense	FY 2017/18	FY 2016/17
Discount Rate		
Beginning of year	6.50%	6.50%
End of year	6.50%	6.50%
Service cost	\$ 1,221,869	\$ 1,654,915
Interest	4,497,757	4,681,587
Change of benefit terms	0	0
Projected earnings on OPEB plan investments	(1,984,797)	(1,624,863)
Reduction for contributions from active employees	0	0
OPEB plan administrative expenses	7,500	3,000
Current period recognition of deferred outflows / (inflows) of resources		
Differences between expected and actual experience	\$ (1,898,267)	\$ (239,215)
Changes in assumptions	(1,107,550)	(402,745)
Net difference between projected and actual earnings on OPEB plan investments	(351,796)	(289,766)
Total current period recognition	\$ (3,357,613)	\$ (931,726)
Total OPEB expense	\$ 384,716	\$ 3,782,913

GASB Disclosures

City of Dover Interim GASB 74/75 Valuation for Fiscal Year Ending June 30, 2018

Deferred Outflows / (Inflows) of Resources

Deferred Outflows / (Inflows) of Resources represents the following items that have not been recognized in the OPEB Expense:

1. Differences between expected and actual experience of the OPEB plan
2. Changes of assumptions
3. Differences between projected and actual earnings in OPEB plan investments (for funded plans only)

The initial amortization period for the first two items noted above is based on expected future service lives while the difference between the projected and actual earnings in OPEB plan investment is amortized over five years. All balances are amortized linearly on a principal only basis and new bases will be created annually for each of the items above.

Differences between expected and actual experience for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of June 30, 2018
June 30, 2017 *	\$ (2,870,577)	5	\$ (657,841)	\$ (1,973,521)
June 30, 2018	\$ (6,202,130)	5	\$ (1,240,426)	\$ (4,961,704)

Changes in assumptions for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of June 30, 2018
June 30, 2017 **	\$ (4,832,943)	5	\$ (1,107,550)	\$ (3,322,648)
June 30, 2018	\$ 0	N/A	\$ 0	\$ 0

Net Difference between projected and actual earnings in OPEB plan investments for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of June 30, 2018
June 30, 2017	\$ (1,448,830)	5	\$ (289,766)	\$ (869,298)
June 30, 2018	\$ (310,152)	5	\$ (62,030)	\$ (248,122)

* The amortization period for the differences between actual and expected experience created for the fiscal year ending June 30, 2017 has been updated from 12 years as shown in the FYE June 30, 2017 GASB 74/75 report to 5 years to take into account the average remaining service lives of inactive. The annual recognition for FY 2017/18 is based on the unamortized balance as of June 30, 2017 (-\$2,631,362) divided by the remaining 4 years of amortization.

** The amortization period for changes in assumptions created for the fiscal year ending June 30, 2017 has been updated from 12 years as shown in the FYE June 30, 2017 GASB 74/75 report to 5 years to take into account the average remaining service lives of inactive. The annual recognition for FY 2017/18 is based on the unamortized balance as of June 30, 2017 (-\$4,430,198) divided by the remaining 4 years of amortization.

GASB Disclosures

City of Dover Interim GASB 74/75 Valuation for Fiscal Year Ending June 30, 2018

Deferred Outflows / (Inflows) of Resources (Continued)

As of fiscal year ending June 30, 2018	Deferred Outflows	Deferred Inflows
Differences between expected and actual experience	\$ 0	\$ (6,935,225)
Changes in assumptions	0	(3,322,648)
Net difference between projected and actual earnings in OPEB plan investments	0	(1,117,420)
Total	\$ 0	\$ (11,375,293)

Annual Amortization of Deferred Outflows / (Inflows)

The balances of June 30, 2018 of the deferred outflows / (inflows) of resources will be recognized in OPEB expense in the future fiscal years as noted below.

FYE	Balance
2019	\$ (3,357,613)
2020	\$ (3,357,613)
2021	\$ (3,357,609)
2022	\$ (1,302,458)
2023	\$ 0
Thereafter	\$ 0

GASB Disclosures

City of Dover Interim GASB 74/75 Valuation for Fiscal Year Ending June 30, 2018

Sensitivity Results

The following presents the net OPEB liability as of June 30, 2018, calculated using the discount rate assumed and what it would be using a 1% higher and 1% lower discount rate.

- The current discount rate is 6.50%.
- The 1% decrease in discount rate would be 5.50%.
- The 1% increase in discount rate would be 7.50%.

As of June 30, 2018	Net OPEB Liability
1% Decrease	\$ 40,823,264
Current Discount Rate	\$ 31,759,477
1% Increase	\$ 24,370,995

The following presents the net OPEB liability as of June 30, 2018, using the health care trend rates assumed and what it would be using 1% higher and 1% lower health care trend rates.

- The current health care trend rate starts at an initial rate of 8.50%, decreasing to an ultimate rate of 5.00%.
- The 1% decrease in health care trend rates would assume an initial rate of 7.50%, decreasing to an ultimate rate of 4.00%.
- The 1% increase in health care trend rates would assume an initial rate of 9.50%, decreasing to an ultimate rate of 6.00%.

As of June 30, 2018	Net OPEB Liability
1% Decrease	\$ 23,453,178
Current Trend Rates	\$ 31,759,477
1% Increase	\$ 42,032,238

GASB Disclosures

City of Dover Interim GASB 74/75 Valuation for Fiscal Year Ending June 30, 2018

Asset Information

Asset Breakdown	FY 2016/17	FY 2017/18
Assets		
Cash and cash equivalents	\$ 1,280,064	\$ 1,002,348
Securities lending cash collateral	0	0
Total cash	\$ 1,280,064	\$ 1,002,348
Receivables		
Contributions	\$ 0	\$ 0
Accrued interest	0	0
Total receivables	\$ 0	\$ 0
Investments		
Fixed income	\$ 0	\$ 0
Equities	0	0
Mutual Funds	28,248,757	33,358,064
Total investments	\$ 28,248,757	\$ 33,358,064
Total Assets	\$ 29,528,821	\$ 34,360,412
Liabilities		
Payables		
Accounts Payable	\$ 474,975	\$ 1,250
Securities lending expense	0	0
Total liabilities	\$ 474,975	\$ 1,250
Net Position Restricted to OPEB	\$ 29,053,846	\$ 34,359,162

GASB Disclosures

City of Dover Interim GASB 74/75 Valuation for Fiscal Year Ending June 30, 2018

Asset Information (Continued)

Asset Reconciliation	FY 2016/17	FY 2017/18
Additions		
Contributions Received		
Employer	\$ 4,602,728	\$ 5,721,795
Employee	0	0
Total contributions	\$ 4,602,728	\$ 5,721,795
Investment Income		
Net increase in fair value of investments	\$ 2,431,974	\$ 1,544,455
Interest and Dividends	667,669	772,872
Investment expense, other than from securities lending	(25,950)	(22,378)
Securities lending income	0	0
Securities lending expense	0	0
Net investment income	\$ 3,073,693	\$ 2,294,949
Total additions	\$ 7,676,421	\$ 8,016,744
Deductions		
Benefit payments	\$ 2,662,737	\$ 2,703,928
Administrative expenses	3,000	7,500
Other	0	0
Total deductions	\$ 2,665,737	\$ 2,711,428
Net increase in net position	\$ 5,010,684	\$ 5,305,316
Net position restricted to OPEB		
Beginning of year	\$ 24,043,162	\$ 29,053,846
End of year	\$ 29,053,846	\$ 34,359,162

Actuarially Determined Contributions

City of Dover Interim GASB 74/75 Valuation for Fiscal Year Ending June 30, 2018

The Actuarially Determined Contributions calculated below are recommended target contributions and assumes that the Plan Sponsor has the ability to contribute these amounts on an annual basis. The Plan Sponsor has the responsibility to decide how much it should contribute after considering its other needs and the OPEB participants' needs.

	FY 2018/19			
Discount rate	6.5%	6.5%	6.5%	6.5%
Actuarial cost method	Entry age normal Level % of Salary	Entry age normal Level % of Salary	Entry age normal Level % of Salary	Entry age normal Level % of Salary
Amortization type	Level Dollar	Level Dollar	Level Dollar	Level Dollar
Amortization period	30 years	30 years	30 years	30 years
Fund	General (110)	Water (412)	Electric (480)	Total
Actuarial accrued liability (AAL) – beginning of year	\$ 48,692,321	\$ 5,101,869	\$ 12,324,449	\$ 66,118,639
Actuarial value of assets – beginning of year	(25,805,836)	(1,942,403)	(6,610,923)	(34,359,162)
Unfunded AAL – beginning of year	\$ 22,886,485	\$ 3,159,466	\$ 5,713,526	\$ 31,759,477
Normal Cost	\$ 1,068,020	\$ 75,967	\$ 57,709	\$ 1,201,696
Amortization of UAAL	1,645,623	227,177	410,824	2,283,624
Total normal cost plus amortization	\$ 2,713,643	\$ 303,144	\$ 468,533	\$ 3,485,320
Interest to the end of year	176,387	19,704	30,455	226,546
Actuarially Determined Contribution – Preliminary	\$ 2,890,030	\$ 322,848	\$ 498,988	\$ 3,711,866
Expected benefit payments	2,258,497	298,200	831,387	3,388,084
Actuarially Determined Contribution – Final¹	\$ 2,890,030	\$ 322,848	\$ 831,387	\$ 4,044,265

Actuarially Determined Contribution (ADC) is the target or recommended contribution to a defined benefit OPEB plan, which if paid on an ongoing basis, will provide sufficient resources to fund future costs for services to be earned and liabilities attributed to past services. This is typically higher than the pay-as-you-go cost because it includes recognition of employer costs expected to be paid in future accounting periods.

¹ Set to be the greater of the preliminary ADC and expected benefit payments.

Discussion of Discount Rates

City of Dover Interim GASB 74/75 Valuation for Fiscal Year Ending June 30, 2018

Under GASB 74, the discount rate used in valuing OPEB liabilities for funded plans as of the Measurement Date must be based on the long-term expected rate of return on OPEB plan investments that are expected to be used to finance future benefit payments to the extent that (a) they are sufficient to pay for the projected benefit payments and (b) the OPEB plan assets are invested using a strategy that will achieve that return. When the OPEB plan investments are insufficient to cover future benefit payments, a yield for 20-year tax-exempt general obligation municipal bonds with an average rating of AA /Aa or higher (or equivalent quality on another rating scale) must be used.

For the current valuation:

1. The long-term expected rate of return on OPEB plan investment is 6.50%. More information about the long-term expected rate of return on OPEB plan investments is shown on the next page.
2. The discount rate used when the OPEB plan investments are insufficient to pay for future benefit payments are selected from the range of indices as shown in the table below, where the range is given as the spread between the lowest and highest rate shown.
3. The City's funding policy is to make annual contributions to an OPEB trust fund equal to an Actuarially Determined Contribution (ADC) amount. The final equivalent single discount rate used for this year's valuation is 6.50% as of June 30, 2018.

	Bond Buyer Go 20- Bond Municipal Bond Index	S&P Municipal Bond 20-Year High Grade Rate Index	Fidelity 20-Year Go Municipal Bond Index	Bond Index Range
Yield as of June 30, 2017	3.58%	3.13%	3.56%	3.13% - 3.58%
Yield as of June 30, 2018	3.87%	2.98%	3.62%	2.98% - 3.87%

Discussion of Discount Rates

City of Dover Interim GASB 74/75 Valuation for Fiscal Year Ending June 30, 2018

The long-term expected rate of return of 6.5% on OPEB plan investments was confirmed by the City's investment advisor based on the target allocation on the OPEB Trust. The OPEB plan's target asset allocation as of June 30, 2018 are summarized in the following table:

Asset Class	Target Allocation
Cash & Short-Term Bond	9.0%
Non-traditional Bond	4.5%
Inflation-Protected Bond	4.0%
Intermediate Term Bond	4.5%
Long-Term Bond	4.0%
High Yield Bond	5.0%
Large Value	8.0%
Large Growth	11.0%
Mid Cap Equity	8.0%
Small Cap Equity	7.0%
Small Cap Growth	4.0%
Foreign Equity	14.0%
Diversified Emerging Markets	12.0%
Real Estate	5.0%
Total	100.0%

Summary of Key Actuarial Assumptions

City of Dover Interim GASB 74/75 Valuation for Fiscal Year Ending June 30, 2018

For a complete summary of actuarial methods and assumptions, refer to the GASB 74/75 actuarial valuation report for the fiscal year ending June 30, 2017.

Measurement Date

For fiscal year ending June 30, 2018, a June 30, 2018 measurement date was used.

Actuarial Valuation Date

July 1, 2017 with liabilities projected to the June 30, 2018 measurement date on a “no loss / no gain” basis.

Discount Rate

6.50% as of July 1, 2017 and 6.50% as of June 30, 2018

Refer to the Discussion of Discount Rates section for more information on selection of the discount rate.

Payroll Growth

General wage inflation (2.5%) plus merit / productivity increases are as shown below, which are based on the Delaware State Employees’ Pension valuation as of June 30, 2016.

YOS	Rates
0	11.50%
5	5.15%
10	3.80%
15	3.10%
20	2.60%
21+	2.50%

Inflation Rate

2.5% per year included in payroll growth

Cost Method

Allocation of Actuarial Present Value of Future Benefits for services prior and after the Measurement Date was determined using Entry Age Normal Level % of Salary method where:

- service Cost for each individual participant, payable from date of employment to date of retirement, is sufficient to pay for the participant’s benefit at retirement; and
- annual Service Cost is a constant percentage of the participant’s salary that is assumed to increase according to the Payroll Growth.

Summary of Key Actuarial Assumptions

City of Dover Interim GASB 74/75 Valuation for Fiscal Year Ending June 30, 2018

Health Care Trend Rates	FYE	Pre-65	Post-65	Part B
	2019	8.5%	7.5%	4.5%
	2020	8.0%	7.0%	4.5%
	2021	7.5%	6.5%	4.5%
	2022	7.0%	6.0%	4.5%
	2023	6.5%	5.5%	4.5%
	2024	6.0%	5.0%	4.5%
	2025	5.5%	4.5%	4.5%
	2026	5.0%	4.5%	4.5%
	2027+	4.5%	4.5%	4.5%

Actuary's Notes

City of Dover Interim GASB 74/75 Valuation for Fiscal Year Ending June 30, 2018

Interim year valuation results have been projected from the prior year's valuation with adjustments for actual premium increases for the City's health plans and Medicare Part B from 2017/18 to 2018/19. Making this change resulted in a reduction in liabilities.

Premium Rates

A comparison of the monthly premium rates effective July 1, 2017 and July 1, 2018 are as shown below.

Health Plans	Eff. 7/1/2017		Eff. 7/1/2018	
	EE	EE/Sp	EE	EE/Sp
First State Basic Plan	\$ 732.84	\$ 1,513.32	\$ 732.84	\$ 1,513.32
Aetna HMO	\$ 764.94	\$ 1,609.82	\$ 764.94	\$ 1,609.82
Aetna CDH Gold	\$ 758.36	\$ 1,569.54	\$ 758.36	\$ 1,569.54
Comprehensive PPO	\$ 836.26	\$ 1,732.42	\$ 836.26	\$ 1,732.42
Medicfill including Rx	\$ 485.06	\$ 970.12	\$ 485.06	\$ 970.12

GASB Results by Group

City of Dover Interim GASB 74/75 Valuation for Fiscal Year Ending June 30, 2018

Results by Group

As of June 30, 2018	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability
General Fund (110)	\$ 48,692,321	\$ (25,805,836)	\$ 22,886,485
Water Fund (412)	5,101,869	(1,942,403)	3,159,466
Electric Fund (480)	12,324,449	(6,610,923)	5,713,526
Total	\$ 66,118,639	\$ (34,359,162)	\$ 31,759,477

As of June 30, 2018	Unamortized Balance of Deferred Inflows	Unamortized Balance of Deferred Outflows	OPEB Expense
General Fund (110)	\$ (10,152,178)	\$ 0	\$ (170,368)
Water Fund (412)	(750,254)	754,474	364,733
Electric Fund (480)	(1,227,335)	0	190,350
Total	\$ (12,129,767)	\$ 754,474	\$ 384,716