

**CITY OF MIRAMAR
FIREFIGHTERS' RETIREMENT PLAN**

Required Supplementary Information

Under GASB No. 67/68

Fiscal Year October 1, 2016
through September 30, 2017

DuLaney and Company, Inc.
Actuarial Services

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Disclosures Related to the City of Miramar Firefighters' Retirement Plan – GASB 68**Net Pension Liability of the City**

The components of the net pension liability of the City at September 30, 2017 were as follows:

	<u>2017</u>
Total pension liability	\$ 196,056,137
Plan fiduciary net position	<u>(137,646,256)</u>
City net pension liability	<u>\$ 58,409,881</u>
Plan fiduciary net position as a percentage of total pension liability	70.21%

Participant Summary Data

Active Participants	130
Terminated Vested	4
Receiving Benefits	43
DROP Participants	16
Annual Covered Payroll	\$ 11,648,795

INFORMATION USED TO DETERMINE NET PENSION LIABILITY

Actuarial Valuation Date	September 30, 2017
Measurement Date	September 30, 2017
Employer's Fiscal Year Ending Date (Reporting Date)	September 30, 2017

Methods and Assumptions

Cost Method	Entry Age Normal
Inflation	2.50%
Projected salary increases	9.18% per annum for the first six (6) years of service, and 4.03% per annum thereafter.
Investment rate of return	7.00% compounded annually, net of pension plan investment expense, including inflation.

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Retirement Age See "Rates of Retirement" section in October 1, 2017 Actuarial Valuation Report.

Future Contributions Contributions from the employer and employees are assumed to be made as legally required.

Mortality

Pre-Retirement:

Female Non-Disabled: RP2000 Generational, 100% Combined Healthy with White Collar Adjustment, Scale BB

Male Non-Disabled: RP2000 Generational, 10% Combined Healthy with White Collar Adjustment / 90% Combined Healthy with Blue Collar Adjustment, Scale BB

Post-Retirement:

Female Non-Disabled: RP2000 Generational, 100% Annuitant White Collar, Scale BB

Male Non-Disabled: RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue Collar, Scale BB

Pre-Retirement & Post-Retirement:

Female Disabled: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale

Male Disabled: 60% RP2000 Disabled Male setback four years / 40% Annuitant White Collar with no setback, no projection scale

Discount Rate

The discount rate used to measure the total pension liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that Trust member contributions will be made at the current contribution rates and that contributions from the City will be made at statutorily required rates, actuarially determined. Based on those assumptions, the Trust's fiduciary net position was projected to be available to make all projected future benefit payments of current Trust members. Therefore, the long term expected rate of return on pension Trust investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability of the City using the discount rate of 7.00%, as well as what the employer net pension liability would if it were calculated using a discount rate that is 1-percentage-point lower (6.00 percent) or 1-percentage-point higher (8.00 Percent) than the current rate:

City Net Pension Liability

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
September 30, 2017	\$ 85,819,121	\$ 58,409,881	\$ 36,621,600



Disclosures Related to the City of Miramar Firefighters' Retirement Plan - GASB68**Schedule I****Pension Expense for the Fiscal Year**

Service cost	\$ 3,771,029
Other recognized changes in net pension liability:	
Expected interest growth	13,003,307
Expected Investment (gain)/loss	(8,394,437)
Employee contributions	(3,724,060)
Benefit payments & refunds	0
Administrative expenses	199,195
Changes in benefit terms	0
Recognition of Outflow of resources	1,873,540
Recognition of (Inflow) of resources	(2,708,517)
Pension expense	\$ 4,020,057 *

* This amount is recognized on the employer's income statement, along with the employer contribution for the 2016/2017 fiscal year.

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Disclosures Related to the City of Miramar Firefighters' Retirement Plan - GASB68**Schedule II****Deferred Inflow and Outflow of Resources**

	Deferred Outflows of Resources	Deferred inflows of Resources
Balance as of September 30, 2016	\$ 5,483,900	\$ 4,006,406
Change due to:		
Amortization payments	\$ (1,873,540)	\$ (2,708,517)
Investment gain/(loss)		\$ 6,858,503
Demographic (gain)/loss	\$ 2,323,495	
Assumption changes		
Total change	\$ 449,955	\$ 4,149,986
Balance as of September 30, 2017	\$ 5,933,855 *	\$ 8,156,392 *

* These amounts are recognized on the employer's balance sheet.

Note: The amortization period for demographic experience and assumption changes was 8.00 for the 2016/2017 fiscal year.

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Disclosures Related to the City of Miramar Firefighters' Retirement Plan - GASB68

Schedule III

Balance Equation

Net pension liability as of September 30, 2016	\$	64,927,981
Plus pension expense for the 2016/2017 fiscal year		4,020,057
Minus employer contribution for the 2016/2017 fiscal year		(6,838,126)
Plus change in balance of deferred outflows of resources		449,955
Minus change in balance of deferred inflows of resources		(4,149,986)
Net pension liability as of September 30, 2017	\$	58,409,881

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Disclosures Related to the City of Miramar Firefighters' Retirement Plan - GASB68**Schedule IV****Amortization Schedule for Deferred Inflow and Outflow of Resources**

	Deferred Outflows of Resources	Deferred Inflows of Resources
Balance as of September 30, 2017	\$ 5,933,855	\$ 8,156,392
Amount recognized in the 2017/2018 pension expense:		
Investment gain/(loss)	\$ 1,381,998	\$ 2,585,904
Demographic (gain)/loss	\$ 322,245	\$ 122,613
Assumption changes	\$ 169,297	\$ -
Total change	\$ 1,873,540	\$ 2,708,517
Balance as of September 30, 2018	\$ 4,060,315	\$ 5,447,875
Amount recognized in the 2018/2019 pension expense:		
Investment gain/(loss)	\$ 1,381,998	\$ 1,780,887
Demographic (gain)/loss	\$ 322,245	\$ 122,613
Assumption changes	\$ 169,297	\$ -
Total change	\$ 1,873,540	\$ 1,903,500
Balance as of September 30, 2019	\$ 2,186,775	\$ 3,544,375
Amount recognized in the 2019/2020 pension expense:		
Investment gain/(loss)	\$ -	\$ 1,780,887
Demographic (gain)/loss	\$ 322,245	\$ 122,613
Assumption changes	\$ 169,297	\$ -
Total change	\$ 491,542	\$ 1,903,500
Balance as of September 30, 2020	\$ 1,695,233	\$ 1,640,875
Amount recognized in the 2020/2021 pension expense:		
Investment gain/(loss)	\$ -	\$ 1,371,701
Demographic (gain)/loss	\$ 322,245	\$ 122,613
Assumption changes	\$ 169,297	\$ -
Total change	\$ 491,542	\$ 1,494,314
Balance as of September 30, 2021	\$ 1,203,691	\$ 146,561
Amount recognized in the 2021/2022 pension expense:		
Investment gain/(loss)	\$ -	\$ -
Demographic (gain)/loss	\$ 322,245	\$ 122,613
Assumption changes	\$ 169,297	\$ -
Total change	\$ 491,542	\$ 122,613
Balance as of September 30, 2022	\$ 712,149	\$ 23,948

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Disclosures Related to the City of Miramar Firefighters' Retirement Plan - GASB68

Schedule V

STATEMENT OF OUTFLOWS AND INFLOWS
ARISING FROM CURRENT REPORTING PERIOD

A. Outflows (Inflows) of Resources due to Liabilities		
1. Difference between expected and actual experience of the Total Pension Liability due to (gains) or losses	\$	2,323,495
2. Assumption Changes (gains) or losses	\$	-
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}		8.00
4. Outflow (Inflow) of Resources to be recognized in the current pension expense for the difference between expected and actual experience of the Total Pension Liability	\$	295,292
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for assumption changes	\$	-
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities		295,292
7. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for the difference between expected and actual experience of the Total Pension Liability	\$	2,028,203
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for assumption changes	\$	-
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	\$	2,028,203
B. Outflows (Inflows) of Resources due to Assets		
1. Net difference between projected and actual earnings on pension plan investments due to (gains) or losses	\$	(6,858,503)
2. Recognition period for Assets {in years}		5.00
3. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Assets	\$	(1,371,701)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$	(5,486,802)
C. Outflow of Resources due to Employer Contribution		
1. Deferred Outflow of Resources due to Employer pension contribution made subsequent to 9/30/2017 but before 9/30/2018		TBD

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Disclosures Related to the City of Miramar Firefighters' Retirement Plan - GASB68**STATEMENT OF OUTFLOWS AND INFLOWS
ARISING FROM CURRENT AND PRIOR REPORTING PERIODS**

A. Outflows and Inflows of Resources due to Liabilities and Assets to be Recognized in Current Pension Expense	Outflows of Resources	Inflow of Resources	Net Outflows of Resources
1. Due to Liabilities	\$ 491,542	\$ 122,613	\$ 368,929
2. Due to Assets	\$ 1,381,998	\$ 2,585,904	\$ (1,203,906)
3. Total	\$ 1,873,540	\$ 2,708,517	\$ (834,977)
B. Outflows and Inflows of Resources by Source to be Recognized in Current Pension Expense			
	Outflows of Resources	Inflow of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	\$ 322,245	\$ 122,613	\$ 199,632
2. Assumption Changes	\$ 169,297	\$ -	\$ 169,297
3. Net Difference between projected and actual earnings on pension plan investments	\$ 1,381,998	\$ 2,585,904	\$ (1,203,906)
4. Total	\$ 1,873,540	\$ 2,708,517	\$ (834,977)
C. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses			
	Outflows of Resources	Inflow of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	\$ 2,154,077	\$ 7,519,374	\$ (5,365,297)
2. Assumption Changes	\$ 1,015,784	\$ -	\$ 1,015,784
3. Net Difference between projected and actual earnings on pension plan investments	\$ 2,763,994	\$ 637,018	\$ 2,126,976
4. Total	\$ 5,933,855	\$ 8,156,392	\$ (2,222,537)
D. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future Pension Expenses			
	Year Ending September	Net Deferred Outflows of Resources	
	2017	\$ (834,977)	
	2018	\$ (29,960)	
	2019	\$ (1,411,958)	
	2020	\$ (1,002,772)	
	2021	\$ 368,929	
	Thereafter	\$ 688,201	
	Total	\$ (2,222,537)	

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Disclosures Related to the City of Miramar Firefighters' Retirement Plan - GASB68

Schedule VI

SUMMARY OF REMAINING DEFERRED
OUTFLOWS AND INFLOWS OF RESOURCES

<u>Date Established</u>	<u>Source</u>	<u>Recognition Period (years)</u>	<u>Original Amount</u>	<u>Years Remaining</u>	<u>Remaining Amount</u>	<u>Amount Recognized in Current Expense</u>
Deferred Outflows of Resources						
9/30/2014	Liability Exp. Loss	8.67	\$ 233,686	5.67	\$ 152,827	\$ 26,953
9/30/2015	Investment Exp. Loss	5.00	\$ 6,909,988	3.00	\$ 4,145,992	\$ 1,381,998
9/30/2016	Assumption Change	8.00	\$ 1,354,378	7.00	\$ 1,185,081	\$ 169,297
9/30/2017	Liability Exp. Loss	8.00	\$ 2,323,495	8.00	\$ 2,323,495	\$ 295,292
	Subtotal		\$ 10,821,547		\$ 7,807,395	\$ 1,873,540
Deferred Inflows of Resources						
9/30/2014	Investment Exp. Gain	5.00	\$ (4,025,083)	2.00	\$ (1,610,032)	\$ (805,017)
9/30/2015	Liability Exp. Gain	8.14	\$ (933,871)	6.14	\$ (704,419)	\$ (114,726)
9/30/2016	Liability Exp. Gain	8.00	\$ (63,099)	7.00	\$ (55,212)	\$ (7,887)
9/30/2016	Investment Exp. Gain	5.00	\$ (2,045,929)	4.00	\$ (1,636,743)	\$ (409,186)
9/30/2017	Investment Exp. Gain	5.00	\$ (6,858,503)	5.00	\$ (6,858,503)	\$ (1,371,701)
	Subtotal		\$ (13,926,485)		\$ (10,864,909)	\$ (2,708,517)
	GRAND TOTAL		\$ (3,104,938)		\$ (3,057,514)	\$ (834,977)

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Disclosures Related to the City of Miramar Firefighters' Retirement Plan - GAB68

Schedule VII

Schedule of Changes in the City's Net Pension Liability

	Total Pension Liability	Fiduciary Net Position	Net Pension Liability
Balance as of 9/30/2016	\$ 182,375,713	\$ (117,447,732)	\$ 64,927,981
Change due to:			
Service cost	\$ 3,771,029	\$ -	\$ 3,771,029
Expected interest growth	13,003,307	(8,394,437)	4,608,870
Unexpected investment income	-	(6,858,503)	(6,858,503)
Demographic experience	2,323,495	-	2,323,495
Employer contributions	-	(6,838,126)	(6,838,126)
employee contributions	-	(3,724,060)	(3,724,060)
Benefit payments & refunds	(5,417,407)	5,417,407	-
Administrative expense	-	199,195	199,195
Changes in benefit terms	-	-	-
Assumption changes	-	-	-
Balance as of 9/30/2017	\$ 196,056,137	\$ (137,646,256)	\$ 58,409,881

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Disclosures Related to the City of Miramar Firefighters' Retirement Plan - GAB68

Measurement Date	Total Pension Liability	Fiduciary Net Position	Net Pension Liability	Funded Percentage	Covered Payroll	Net Pension Liability as % of Covered Payroll
September 30, 2017	\$ 196,056,137	\$ 137,646,256	\$ 58,409,881	70.21%	\$ 11,648,795	501.42%
September 30, 2016	180,970,185	117,447,732	63,522,453	64.90%	11,443,779	555.08%
September 30, 2015	168,758,326	104,321,909	64,436,417	61.82%	14,719,328 *	437.77%
September 30, 2014	157,947,064	100,389,471	57,557,593	63.56%	12,671,151 *	454.24%
September 30, 2013	128,623,473	68,554,188	60,069,285	53.30%	10,356,537	580.01%
September 30, 2012	99,506,157	53,729,134	45,777,023	54.00%	10,149,386	451.03%
September 30, 2011	92,348,669	52,354,286	39,994,383	56.69%	9,840,908	406.41%
September 30, 2010	85,689,622	47,812,503	37,877,119	55.80%	9,516,242	398.03%
September 30, 2009	80,498,725	45,780,727	34,717,998	56.87%	9,885,854	351.19%
September 30, 2008	75,586,555	43,450,514	32,136,041	57.48%	9,062,451	354.61%

* Total payroll. All prior years show pensionable earnings.

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Disclosures Related to the City of Miramar Firefighters' Retirement Plan – GASB 68**Schedule IX****Schedule of Contributions by Employer**

	2017	2016	2015	2014	2013
Actuarially determined contribution	\$ 6,040,012	\$ 5,150,913	\$ 5,107,415	\$ 4,843,956	\$ 4,228,032
Contributions in relation to the actuarially determined contribution	6,040,012	5,150,913	5,115,693	4,843,956	4,228,032
Contribution deficiency (excess)	\$ -	\$ -	\$ (8,278)	\$ -	\$ -
Covered-employee payroll	\$ 11,648,795	\$ 11,443,779	\$ 14,719,328*	\$ 12,671,151*	\$ 10,356,537
Contributions as a percentage of covered-employee payroll	51.85%	45.01%	34.8%	38.2%	40.8%
Actuarially determined contribution	\$ 3,871,266	\$ 3,617,946	\$ 3,263,701	\$ 3,158,881	\$ 3,103,469
Contributions in relation to the actuarially determined contribution	3,871,266	3,617,946	3,263,701	3,158,881	3,103,469
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -
Covered-employee payroll	\$ 10,149,386	\$ 9,840,908	\$ 9,516,242	\$ 9,885,854	\$ 9,062,451
Contributions as a percentage of covered-employee payroll	38.1%	36.8%	34.3%	32.0%	34.2%

* Total payroll. All prior years show pensionable earnings.

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Disclosures Related to the City of Miramar Municipal Police Officers' Retirement Plan – GASB 68

Notes to Required Supplementary Information

Method and assumptions used in calculations of the City's actuarially determined contributions

The actuarially determined contribution rates in the schedule of the City's contributions are calculated as of October 1, for the following, not the current, fiscal year. The following actuarial methods and assumptions were used to determine contribution rates.

1. Actuarial Cost Method: Projected Unit Credit
2. Amortization Method: Level percent of payroll, closed
3. Remaining Amortization Period: 15 years
4. Asset Valuation Method: The actuarial value of assets is determined by smoothing the differences between actuarial investment earnings and assumed investment return over five (5) years.
5. Interest: 8.15%, net of investment expenses, compounded annually.
6. Inflation: 3.00%
7. Salary Increases: 6.00% per year for the first six (6) years of service and 1.00% per year thereafter. Salaries are also assumed to have an additional increase equal to the inflation assumption.
8. Rates of Retirement:

The following are the retirement rates assumed for the participants eligible for retirement / DROP:

Participants with 10 – 24 years of service		Participants with at least 25 years of service
Age	Percentage Retirement	Percentage Retirement
Less than 50	0%	100%
50	1%	100%
51 to 54	2%	100%
55 to 59	50%	100%
60 & over	100%	100%

9. Mortality:

Pre-Retirement:

Female Non-Disabled: RP2000 Generational, 100% Combined Healthy with White Collar Adjustment, Scale BB

Male Non-Disabled: RP2000 Generational, 10% Combined Healthy with White Collar Adjustment / 90% Combined Healthy with Blue Collar Adjustment, Scale BB

Post-Retirement:

Female Non-Disabled: RP2000 Generational, 100% Annuitant White Collar, Scale BB

Male Non-Disabled: RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue Collar, Scale BB

Pre-Retirement & Post-Retirement:

Female Disabled: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale

Male Disabled: 60% RP2000 Disabled Male setback four years / 40% Annuitant White Collar with no setback, no projection scale

