



The Woodlands Firefighters' Retirement System
The Woodlands, Texas

GASB 67/68 Report for
Fiscal Year Ended December 31, 2020

**Prepared by
Definiti LLC
April 16, 2021**



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April 16, 2021

Board of Trustees
The Woodlands Firefighters' Retirement System
P.O. Box 130388
The Woodlands, Texas 77393

Re: GASB No. 67/68

Dear Mr. Adams:

The Board of Trustees for The Woodlands Firefighters' Retirement System retained Definiti LLC to perform the GASB No. 67/68 measurements for the fiscal year ending December 31, 2020 reporting date. This report summarizes the GASB No. 67/68 financial information, and it is our understanding that the Board will provide the Township with a copy of this report.

The December 31, 2020 Total Pension Liability and the associated sensitivity information were derived from the January 1, 2020 actuarial valuation projected to the end of the fiscal year using generally accepted actuarial roll-forward procedures. The December 31, 2020 GASB 67/68 results were based on a draft of audited asset information.

The Pension Expense was calculated as required by GASB No. 68, including use of the prescribed amortization periods. Differences between the projected and actual earnings are amortized over 5 years. An amortization period equal to the average future working lifetime is used for Changes in Assumptions and Differences between Expected and Actual Experience.

This report is based upon December 31, 2019 member census data, asset information for the fiscal year ending December 31, 2020, and plan benefit provisions provided by the Board. The accuracy of the valuation results presented in this report is dependent on the accuracy and completeness of the information provided. While the scope of our engagement did not include an audit of the census data, we performed testing as needed to assure its reasonableness and consistency with the prior valuation.

We certify the amounts presented herein have been determined according to the actuarial assumptions and methods selected by the Board of Trustees, with review and concurrence by Definiti. However, it is important to note that future results may be materially different if actual plan experience varies significantly from the underlying valuation basis. Differences could occur for a number of reasons such as plan experience differing from underlying demographic and economic assumptions, changes in the plan provisions, or changes in the law or accounting standards. Due to the limited scope of this report, an analysis of the potential range of any such future measurements has not been performed.

Board of Trustees
April 16, 2021

Information contained in this report was prepared for the Board of Trustees with the expectation that the results would be forwarded to The Woodlands Township's finance department with review by their auditors. It is not intended for any other purposes and should not be distributed to any outside party without the express written consent of Definiti as significantly different results from those contained in this report may be needed for other purposes.

The measurement of funded status for GASB No. 67/68 should not necessarily be relied upon for assessing the need for or amount of future contributions or for assessing the sufficiency of plan assets for settlement of plan liabilities for plan termination.

The undersigned has met the "Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States" and is available to respond to any questions regarding the information contained in this report or to provide further details or explanations as needed, respectfully submitted by:

Definiti LLC

A handwritten signature in blue ink that reads "David A. Sawyer". The signature is written in a cursive style with a large initial "D" and "S".

David A. Sawyer, FSA, EA, MAAA, FCA
Senior Consulting Actuary

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1.1 GASB 67 Plan Accounting Information

Schedule of Changes in The Woodlands Firefighters Retirement System Net Pension Liability and Related Ratios

	<u>December 31, 2018</u>	<u>December 31, 2019</u>	<u>December 31, 2020</u>
Total Pension Liability			
Service Cost	\$2,313,411	\$2,432,667	\$2,662,746
Interest	\$2,010,932	\$2,514,662	\$2,948,592
Changes of benefit terms	(\$1,968,668)	\$0	\$0
Differences between expected and actual experience	(\$208,947)	\$430,210	\$0
Changes of assumptions	\$1,215,535	\$749,231	\$0
Benefit payments, including refunds of member contributions	(\$64,413)	(\$143,323)	(\$172,394)
Net change in total pension liability	\$3,297,852	\$5,983,447	\$5,438,944
Total pension liability - beginning	\$30,264,889	\$33,562,741	\$39,546,188
Total pension liability - ending (a)	\$33,562,741	\$39,546,188	\$44,985,132
Plan fiduciary net position			
Contributions - employer	\$1,398,420	\$1,440,899	\$1,502,558
Contributions - member	\$1,398,420	\$1,440,899	\$1,502,558
Net investment income	(\$1,968,611)	\$6,761,762	\$7,603,615
Benefit payments, including refunds of member contributions	(\$64,413)	(\$143,323)	(\$172,394)
Administrative expense	(\$99,813)	(\$135,180)	(\$61,616)
Other	\$0	\$0	\$0
Net change in plan fiduciary net position	\$664,003	\$9,365,057	\$10,374,721
Plan fiduciary net position - beginning	\$32,286,791	\$32,950,794	\$42,315,851
Plan fiduciary net position - ending (b)	\$32,950,794	\$42,315,851	\$52,690,572
Fund's net pension liability - ending (a) - (b)	\$611,947	(\$2,769,663)	(\$7,705,440)
Plan fiduciary net position as a percentage of the total pension liability	98.18%	107.00%	117.13%
Actual Covered-employee payroll	\$11,482,958	\$12,007,492	\$12,521,317
Fund's net position liability as a percentage of covered employee payroll	5.33%	-23.07%	-61.54%

Notes to Schedule: Actual covered-employee payroll is estimated using firefighter contributions divided by the negotiated contribution percentage.

1.1 GASB 67 Plan Accounting Information (Continued)

Schedule of The Woodlands Contributions

	<u>December 31, 2018</u>	<u>December 31, 2019</u>	<u>December 31, 2020</u>
Township required contribution	\$1,398,420	\$1,440,899	\$1,502,558
Contributions in relation to the Township required contribution	\$1,398,420	\$1,440,899	\$1,502,558
Contribution deficiency (excess)	\$0	\$0	\$0
Actual covered-employee payroll	\$11,482,958	\$12,007,492	\$12,521,317
Contributions as a percentage of covered-employee payroll	12.2%	12.0%	12.0%

Notes to Schedule

Valuation date: December 31, 2019

Contributions to the Fund are based on the TLFRA requirements rather than an actuarially determined rate. The funding policy for The Woodlands Retirement System requires contributions from both the Township and the firefighters. The Township's contribution rate is currently 12.0% of member payroll with each active member contributing 12.0% of plan compensation.

1.1 GASB 67 Plan Accounting Information (Continued)

Notes to Schedule

The long-term expected rate of return on pension plan investments was determined using a building block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation (assumed 2.50%). Best estimates of geometric real rates of return for each major asset class included in the pension plan's target asset allocation as of December 31, 20120 (see the discussion of the pension plan's investment policy) are summarized in the following table:

<u>Asset Class</u>	<u>Long-Term Expected Real Rate of Return</u>
Equity	7.5%
Fixed Income	2.5%
Real Estate	4.5%

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 the City contribution would equal 12.0% of payroll and that member contributions would equal 12.0% of compensation. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension investments was applied to all periods of 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, calculated using the discount rate of 7.00% as well as what the City's net pension liability would be if it were to calculated using the discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate:

	<u>1% Decrease (6.00%)</u>	<u>Current Discount Rate (7.00%)</u>	<u>1% Increase (8.00%)</u>
City's net pension liability	(\$563,075)	(\$7,705,440)	(\$13,605,883)

Schedule of Investment Returns

Fiscal Year Ending December 31

	<u>2018</u>	<u>2019</u>	<u>2020</u>
Annual money-weighted rate of return, net of investment expense	-5.89%	20.01%	17.40%

1.2 GASB 68 City Accounting Information

The Net Pension Liability amounts shown below were measured as of the Township's fiscal year end. The Total Pension Liability used to calculate the Net Pension Liability and certain sensitivity information was based on the January 1, 2020 actuarial valuation rolled-forward to December 31, 2020.

	Increase (Decrease)		
	Total Pension Liability (TPL)	Plan Fiduciary Net Position	Net Pension Liability (NPL)
Balance at 12/31/2019	\$39,546,188	\$42,315,851	(\$2,769,663)
Changes for the year:			
Service Cost	2,662,746		2,662,746
Interest	2,948,592		2,948,592
Experience	-		-
Employer Contributions		1,502,558	(1,502,558)
Member Contributions		1,502,558	(1,502,558)
Net Investment Income		7,603,615	(7,603,615)
Benefit Payments	(172,394)	(172,394)	-
Administrative Expense		(61,616)	61,616
Assumption Changes	-		-
Changes in Benefit Terms			-
Net Change	5,438,944	10,374,721	(4,935,777)
Balance at 12/31/2020	\$44,985,132	\$52,690,572	(\$7,705,440)

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

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

	1% Decrease 6.00%	Current Discount Rate of 7.00%	1% Increase 8.00%
Firefighters' Fund Net Pension Liability	(\$563,075)	(\$7,705,440)	(\$13,605,883)

1.1 GASB 68 City Accounting Information (continued)

Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

Pension Expense Components	FYE 12/31/2020
Service Cost	\$ 2,662,746
Interest on TPL	2,948,592
Differences between expected and actual experience	(18,628)
Changes in Assumptions	140,341
Changes in Benefit Terms	-
Employee Contributions	(1,502,558)
Projected Earnings on Pension Plan Investments	(3,059,098)
Differences between projected and actual earnings on plan investments	(1,212,666)
Pension Plan Administrative Expenses	61,616
Other Changes in Fiduciary Net Position	-
Total Pension Expense	\$ 20,345

For the year ended December 31, 2020, the Township should recognize a pension expense of \$20,345. At December 31, 2020, the Township should report deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Differences between expected and actual experience	790,398	965,847
Changes in assumptions	1,597,268	-
Net difference between projected and actual investment earnings	-	4,873,342
Township contributions subsequent to Measurement Date	-	-
Total	2,387,666	5,839,189

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year Ended September 30:	
2021	(\$1,111,071)
2022	(\$812,187)
2023	(\$1,676,042)
2024	(\$787,190)
2025	\$121,713
Thereafter	\$813,254

2.1 Demographic Summary

	<u>January 1, 2019</u>	<u>January 1, 2020</u>
A. Active Members		
1. Number	138	141
2. Valuation compensation	\$11,936,747	\$12,462,053
3. Average pay	\$87,130	\$88,383
4. Average age	40.7	41.5
5. Average service	13.1	12.1
B. Terminated Vested	1	1
C. Retired or Disabled	1	1
D. Beneficiaries	1	1
E. Refund of Contributions	5	3
F. Total Member Count	146	147
G. Outstanding DROP Balances	\$0	\$0

2.2 Assumptions and Methods

Economic Assumptions

- GASB 67/68 Discount Rate 7.00% per annum (net of investment expenses).
- Investment Return 7.00% per annum (net of investment expenses).
- Administrative Expenses \$100,000 annually, as previously approved by the Board of Trustees.
- Salary Scale The salary increase is based on years of service according to the following table:

Years of Service	Salary Increase
0 – 4	11.5%
5 – 9	6.3%
10 – 14	5.0%
15 +	4.0%

Demographic Assumptions

- Active Mortality PubS-2010 (Above-median, amount-weighted) employee Mortality tables projected generationally with Scale MP-2019.
- Retiree and Vested Mortality PubS-2010 (Above-median, amount-weighted) healthy retiree Mortality tables projected generationally with Scale MP-2019.
- Contingent Survivor Mortality PubS-2010 (Above-median, amount-weighted) contingent survivor Mortality tables projected generationally with Scale MP-2019.
- Disability Mortality PubS-2010 (amount-weighted) disabled retiree Mortality tables projected generationally with Scale MP-2019.

2.2 Assumptions and Methods (continued)

- Retirement Active firefighters are assumed to retire based on rates that vary by age (sample rates shown below).

<u>Age</u>	<u>Service</u>	
	<u>20-23 Years</u>	<u>24+ Years</u>
52	11.67%	11.67%
53	6.67%	6.67%
54	6.67%	6.67%
55	6.67%	6.67%
56	8.33%	75.00%
57	8.33%	75.00%
58	10.00%	76.67%
59	10.00%	76.67%
60	16.67%	83.33%
61	16.67%	83.33%
62	33.33%	100.00%

- Disability Active firefighters are assumed to incur disabilities based on rates that vary by age (sample rates shown below).

<u>Age</u>	<u>Probability</u>
20	0.07%
30	0.09%
40	0.15%
50	0.50%

- Termination Active firefighters are assumed to terminate based on rates that vary by age (sample rates shown below).

<u>Age</u>	<u>Probability</u>
20	9.8%
30	2.8%
40	0.4%
50	0.2%

- DROP Election Two-thirds (2/3) of Members who are eligible for Normal Retirement are assumed to enter DROP, with an assumed DROP Period of four years.

2.2 Assumptions and Methods (continued)

Methods

Valuation Date	January 1, 2020
GASB Measurement Date	December 31, 2020
GASB Asset Valuation Method	December 31, 2020 fair value of assets
Entry Age Normal Actuarial Cost Method	<p>The <u>Entry Age Normal Actuarial Cost Method</u> The present value of the projected benefit (PVB) is determined as of the date the member entered the plan (or would have entered if the plan had always been in effect). The present value of future salary (PVFS) is also determined at entry age. The percentage of the PVFS represented by the PVB is the level percent of pay which, if contributed every year, would exactly fund the benefit if the valuation actuarial assumptions were realized. The actuarial accrued liability (AAL) is the theoretical value of assets which would result from the accumulation of these contributions from the plan entry until the valuation date.</p>
Amortization Method	GASB No. 68 prescribed amortization periods.

2.3 Plan Provisions

Effective Date	The Plan was created January 1, 2015 and most recently restated effective September 14, 2018.
Eligibility	A firefighter shall become a member when he first becomes employed with The Woodlands Fire Department.
Credited Service	Total years and months of years during which a Member makes contributions to the System, including years of prior service purchased.
Compensation	Base pay, including standard overtime pay.
Average Final Compensation	Average Earnings for the highest consecutive 36 months over the last 120 months of service.
Contributions	12.00% of earnings for Member Contributions 12.00% of annual payroll for Township Contributions
Service Retirement	Attainment of age 52 and completion of 20 years of service. 2.50% of Average Final Compensations times Credited Service for first 20 years, plus 3.00% of Average Final Compensation times Credited Service thereafter.
Disability Retirement	Members who are total and permanently disabled, as determined by the board, receive 2.50% of Average Final Compensation times Credited Service, but not less than 50% of Average Final Compensation.
Vested Termination Benefit	Members are eligible to receive a Normal Retirement benefit if 20 or more years of Credited Service has been attained. Normal Retirement benefit payable at age 52.
Refund of Contributions	Non-vested Members are always entitled to a refund of their accumulated contributions (without interest).

2.3 Plan Provisions (continued)

Pre-Retirement Death Benefit

- Spouse

Upon the duty-related death of an active firefighter, a benefit is payable to his beneficiaries commencing on the first of the month following his death.

The benefit payable to the surviving spouse of a firefighter is equal to 75% of the service retirement benefit the firefighter would have been eligible to receive as of the date of death (utilizing at least 20 years of service). This benefit shall be paid as 10-Year Certain and Life Annuity.
- Single

The benefit payable to beneficiary of a firefighter is equal to 75% of the service retirement benefit the firefighter would have been eligible to receive as of the date of death (utilizing at least 20 years of service). This benefit shall be paid as 10-Year Certain Only Annuity.

2.3 Plan Provisions (continued)

Deferred Optional Retirement Program (DROP)

A paid firefighter can elect a FORWARD DROP benefit calculation date no earlier than a date which is the first day of the month following the date of attainment of age 52 and completion of 20 years of service.

The DROP period is not to exceed 60 months and must be in whole year increments.

Each Member who elects to participate in DROP has his monthly annuity benefit calculate as of the date of election. Such monthly benefit will be deferred and will commence at the time of the firefighter's actual retirement from the department. Depending on the Member's election, during the DROP Period, certain amounts will be credited each month to a bookkeeping account under the Member's name (the "DROP Account") in accordance with Option #1 or Option #2 below.

Option #1: During the DROP Period, a Member's monthly annuity benefit amount will be credited each month to the DROP Account. The member must continue to make the required contributions to the System during the DROP Period, but such contributions will not be credited to the Member's DROP Account.

Option #2: During the DROP Period, a Member's monthly annuity benefit amount and the Member's contributions will be credited each month to the DROP account. The Monthly annuity benefit amount shall be reduced by five percent (5%) under this option. The reduction to the monthly annuity benefit amount still applies following the DROP period.

Changes in Plan Provisions

There have been no changes to the plan provisions since the December 31, 2019 valuation.