

# Intensive Review:

Wichita Falls Firemen's Relief and Retirement  
Fund

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October 2022



PENSION REVIEW BOARD

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## Executive Summary

### Introduction

The Texas Pension Review Board selected Wichita Falls Firemen's Relief and Retirement Fund (Wichita Falls Fire) as the next Texas public retirement system for intensive review. This intensive review is intended to assist the retirement system's board of trustees and the City of Wichita Falls in assessing the system's ability to meet its long-term pension obligation. Despite above average investment returns, the funded status has steadily deteriorated over the last twenty years. As the system's funding status deteriorated, it became subject to the funding soundness restoration plan (FSRP) requirement to create a plan to improve funding and reduce the funding period. The primary source of these funding problems were insufficient contributions, but without a commitment from the sponsor to increase contributions and members already paying nearly the full cost of their benefits, the system was left with few options to address the problems at their source. Instead, the system established a collection of unsustainable benefit changes and aggressive assumptions. Without an increase in contributions, the troubling funding reality remains, and the unsustainable changes will eventually exacerbate funding problems rather than improve them.

### Overview

The system should consider adjusting assumptions and plan provisions to align with reasonable expectations, and the city should consider increasing contributions based on those future expectations. Several findings illustrate the challenges both face:

- In 2000, the Wichita Falls Fire total liability was 86 percent funded. As of 2020, there were not enough assets to fully fund the liability for current retirees.
- The city's method to determine contribution levels has led to insufficient contributions, which created the bulk of the unfunded liability. As actuarial assumptions were slow to react to changing demographics and plan provisions, the full extent of the funding problems was obscured by an artificially low funding period.
- As part of the 2018 FSRP, the system implemented a \$100,000 benefit cap not indexed with inflation. The cap erodes the salary replacement level for future members, but the system did not change assumptions or methods as would normally be expected despite the cap representing a reduction in the value of benefits.
- The system's actuarial assumptions are aggressive compared to peers. Projections based on more sustainable plan provisions and moderate assumptions show that funding will not be adequate without substantial contribution increases.
- Even an investment program that is performing well must be adequately funded to allow contributions to grow and meet benefit obligations. The investment return assumption likely will need to be lowered as the retiree member group becomes the majority, requiring safer assets.

## **Conclusion**

Increased contributions are key to reaching a sustainable funded status. The city has taken steps to address this mismatch with a planned contribution increase to 16.18 percent of payroll in fiscal year 2022 – 2023. However, this would still be slightly below the median contribution level for sponsors of peer systems. The city should consider contributing well above the median to make up for past years when contributions were below the actuarially determined contribution. Given that many of the system's assumptions will likely need to be adjusted in the near future, the PRB recommends the system and city continue working together to ensure appropriate assumptions, funding, and plan design for an equitable, sustainable retirement system to serve all stakeholders.

## Background

The Texas Pension Review Board (PRB) selected Wichita Falls Firemen’s Relief and Retirement Fund (Wichita Falls Fire) for an intensive review to examine challenges the retirement system is facing and to serve as a starting point to find solutions to those challenges. Wichita Falls Fire's projected fund exhaustion date and relatively aggressive actuarial valuation assumptions were the primary reasons the system was selected for review. This review is intended to assist the system’s board and sponsor, the City of Wichita Falls, in assessing the system’s ability to pay promised benefits for the firefighters serving the city. The review also serves as an educational resource and case study for other Texas public retirement systems and stakeholders that may be facing similar challenges.

### Key Metrics

Intensive reviews assess issues regarding a system’s actuarial soundness and equitable distribution of benefits.<sup>1</sup> Since financial health is dependent on a system’s liabilities in relation to its assets, intensive reviews focus on both liabilities and assets, as well as funded status, actuarial methods and assumptions, and investment management practices and performance. To address equitable distribution of benefits, intensive reviews may also focus on the structure of benefits provided to different member groups and the quality of benefits provided for the level of employee contributions. The PRB uses nine key metrics to determine and prioritize retirement systems for intensive review. The PRB selected Wichita Falls Fire for review based on the 2020 actuarial valuation data before the 2022 information was available. Where appropriate, information from the January 1, 2022, actuarial valuation is included in the analysis.

Plan Profile (2020 AV)	
<b>Actuarial Accrued Liability:</b>	\$93,066,282
<b>Market Value of Assets:</b>	\$52,839,714
<b>Normal Cost:</b>	13.38% of payroll
<b>Contributions:</b>	13% employee 13% employer
<b>Membership:</b>	159 active 146 annuitants
<b>Social Security Participation:</b>	Yes
<b>Assumptions:</b>	4% payroll growth 7.75% rate of return
<b>Most Recent FSRP:</b>	2018

Amort. Period (Years)	Funded Ratio	UAAL as % of Payroll	Assumed Rate of Return	Payroll Growth Rate	Actual Cont. as % of ADC <sup>2</sup>	Non-Investment Cash Flow as % of FNP <sup>3</sup>	DROP as % of FNP <sup>3</sup>	Fund Exhaustion Date
43.3	56.78%	326%	7.75%	4%	78.69%	-5.68%	N/A	2051

Contribution, cash flow and fund exhaustion data are from the system’s 12/31/2020 financial audit.

<sup>1</sup> §801.202(2), Texas Government Code.

<sup>2</sup> For systems with fixed rate contributions, based on statutory or contractual requirements, the ADC for this purpose is the contribution needed to fund the benefits accrued in the current year and maintain an amortization period that does not exceed 30 years, as required to be reported under §802.101(a), Texas Government Code.

<sup>3</sup> Financial net position

*Wichita Falls Fire is one of a small number of Texas public retirement systems with a fund exhaustion date.*

Public retirement systems are required to perform two periodic actuarial valuations. The accounting valuation must be completed in compliance with Governmental Accounting Standards Board (GASB) No. 67 and is used in the city's annual financial report. A fund exhaustion date, if applicable, will be included in the accounting valuation. The funding valuation is used to determine the funding needs of the plan. The amortization period, which signifies when the pension liability is projected to become fully funded, is included in the funding valuation.

Wichita Falls Fire is one of 12 Texas public retirement systems and two in its peer group with a fund exhaustion date in its accounting valuation.<sup>4</sup> At the fund exhaustion date, the system is projected to have no remaining assets available to pay monthly pension benefits. This means the city might have to begin a pay-as-you-go method where pension benefits are paid as part of the annual budget or risk defaulting on its obligations to Wichita Falls Fire retirees. The first option could potentially require a large portion of the city's budget, restricting its ability to pay for other necessary operations and services. The second option would undermine the retirement security of both active members and retirees who have served the community with the understanding they would be supported in retirement. Both options would likely affect the city's credit rating. It is possible that some middle ground could be reached by reducing a portion of retiree benefits to prevent the benefits being paid from exceeding the available amount of contributions without becoming insolvent,<sup>5</sup> but that outcome would still affect the retirement security of the members.

Unusually, the system has a finite amortization period in the funding valuation, while most plans with fund exhaustion dates have infinite amortization periods. The 2020 funding valuation projected the system to reach 100 percent funded status within 43 years using an open group projection, while the 2020 accounting valuation projected Wichita Falls Fire to exhaust all funds in 31 years and thereafter be unable to pay the promised monthly benefits. This dichotomy between the two valuations is likely due to the different approaches used in each calculation. The calculation of the accounting valuation fund exhaustion date excludes future new entrants from consideration, while the calculation of the funding valuation amortization period includes the impact of future new entrants. If future firefighters are the key to moving from fund depletion to full funding, it would likely cause intergenerational equity issues by placing significant burden on future firefighters.

*Overall, Wichita Falls Fire's assumptions are among the most aggressive in the state.*

Two valuation assumptions, the expected rate of return and payroll growth, are among the nine metrics the PRB uses to select systems for intensive review. Wichita Falls Fire's assumptions are among the most aggressive with both the expected rate of return and payroll growth assumptions measuring among the highest three in its metric in the state. Two other systems had a higher expected rate of return, but those assumptions were somewhat balanced by payroll growth rates significantly closer to the state average.

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<sup>4</sup> The selected peer group includes TLFRA systems with payroll amounts between \$8.8 million and \$20.2 million and liabilities between \$67.1 million and \$121.4 million. See the appendix for additional peer system data.

<sup>5</sup> Section 16, Article 6243e, Vernon's Texas Civil Statutes.

Because contributions are paid as a percentage of payroll, higher payroll growth rate assumptions lead to higher assumed contributions, which in turn leads to a lower amortization period.

## Findings

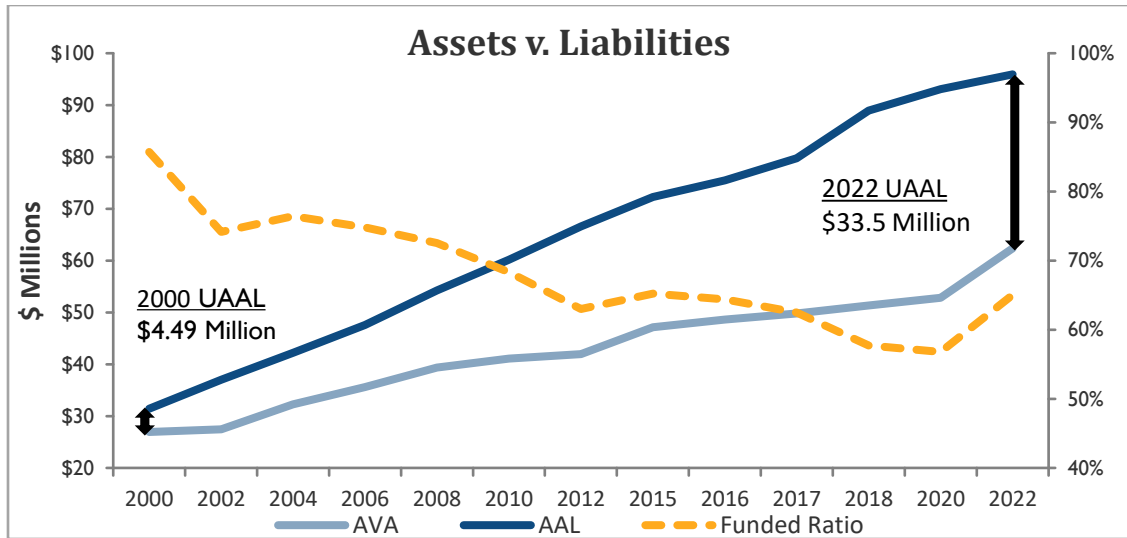
### **Wichita Falls Fire's funded status has steadily deteriorated over the last 20 years despite above average investment returns.**

The graph, *Assets v. Liabilities*, depicts the system's growing unfunded liability and declining funded ratio over the last two decades. As of December 31, 2000, the system was projected to reach 100 percent funded status by January 1, 2017. However, by January 1, 2018, the funded status had steadily declined as illustrated by the following measures:

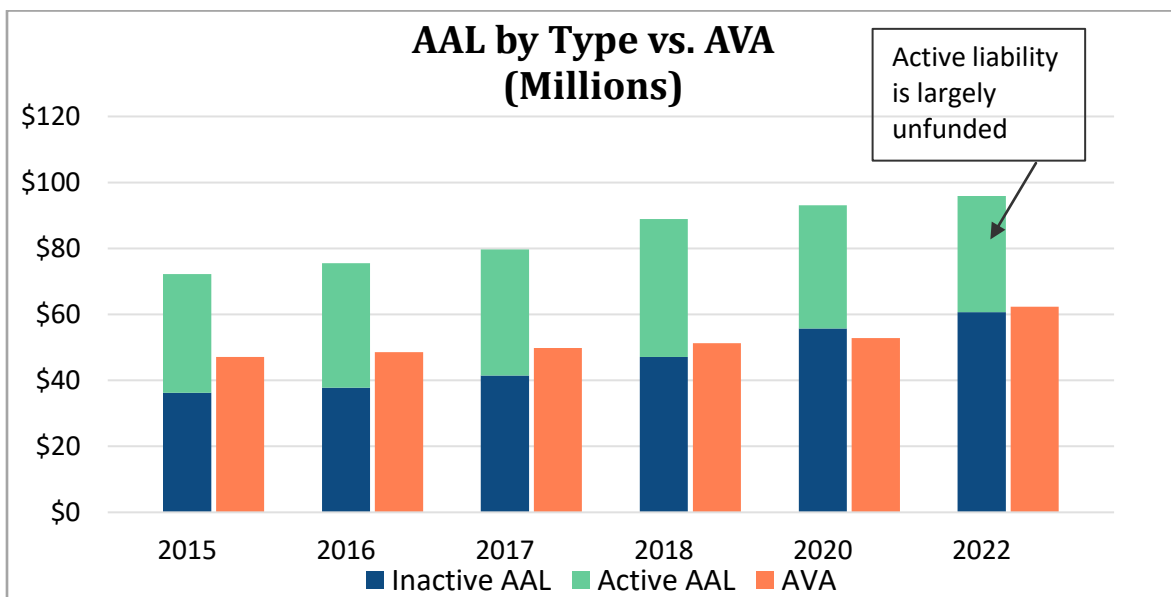
- Funded ratio decreased from 86 percent to 58 percent.
- Unfunded liability as a percentage of payroll increased from 77 percent to 317 percent.
- Amortization period increased from 16.9 years to infinite.
- Assets were projected to be depleted, meaning there would be no assets left in the trust to pay promised benefits by the depletion date.

Wichita Falls Fire submitted a Funding Soundness Restoration Plan (FSRP) in 2016 that included a new tier of reduced benefits for members hired after April 20, 2016. Mainly due to unfavorable demographic experience compared to assumptions, the amortization period increased from 43.7 in 2016 to 56.1 in 2018 prior to adopting more conservative assumptions. The amortization period then increased to infinite once these revised assumptions were adopted. As a result, the system fell out of compliance with its FSRP and became subject to a revised FSRP in 2018. This revised plan, completed in 2019, included more extensive changes than the 2016 FSRP. These changes decreased the amortization period sufficiently to remain under the allowable threshold at the time but did not improve the funded status. From 2018, when the system became subject to the revised FSRP, to January 1, 2022, the funded status decreased for a time before improving after robust asset returns in 2021 such that:

- Funded ratio increased from 58 percent to 65 percent.
- Unfunded liability as a percentage of payroll decreased from 317 percent to 268 percent.
- Amortization period decreased from infinite to 32.1 years.
- System continued to have a projected depletion date according to the latest available audit report based on the January 2020 actuarial valuation.



As of 2020, there were not enough assets to fully cover the retiree liability. After the sizable 2021 asset return, there were just enough assets, as of January 1, 2022, to cover the retiree liability as well as 5 percent of the active liability. Based on nationwide trends for early 2022, that percentage will likely drop back down to zero percent once the 2022 returns are reflected in the next actuarial valuation.<sup>6</sup> Retiree liabilities are typically prioritized because they must be paid the soonest, so little to no assets remain to cover the liability for active members. Actuarial methods are designed to fully fund liabilities for active firefighters by the time they retire. Otherwise, the city and active members will become responsible for funding both the remaining unfunded retiree liability on top of the liability for active members. The chart, *AAL by Type vs. AVA (Millions)*, shows funding trends for both active and inactive liabilities compared with the actuarial value of assets over time.

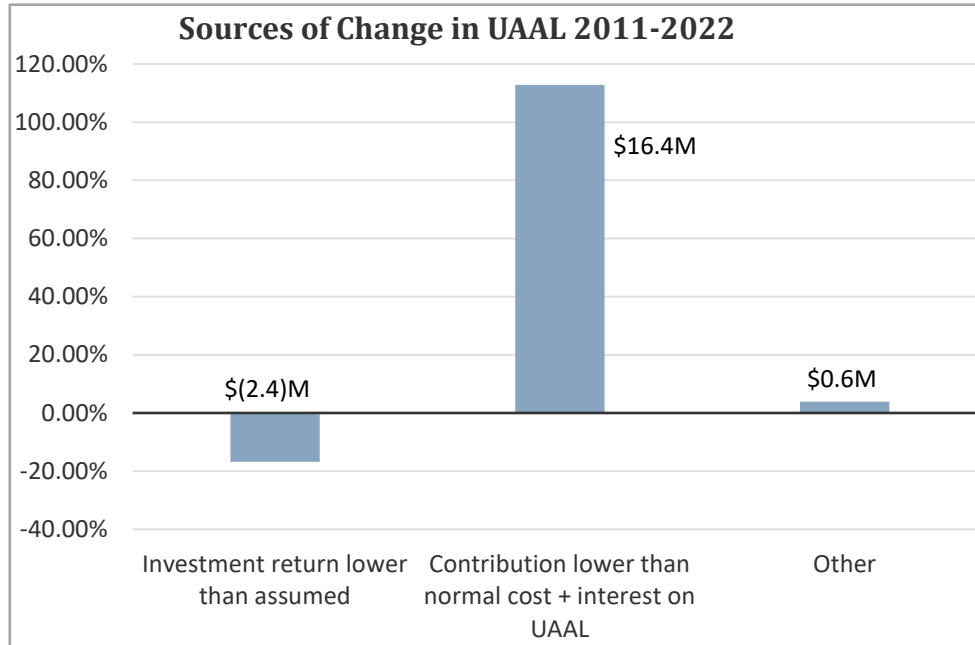


<sup>6</sup> Anthony Randazzo and Jonathan Moody, *State of Pensions 2022: Equable Institute's Annual Report*, Accessed July 26, 2022, [https://equable.org/wp-content/uploads/2022/07/Equable-Institute\\_State-of-Pensions-2022\\_Final.pdf](https://equable.org/wp-content/uploads/2022/07/Equable-Institute_State-of-Pensions-2022_Final.pdf).



**Insufficient contributions are by far the main source of Wichita Falls Fire’s unfunded liability.**

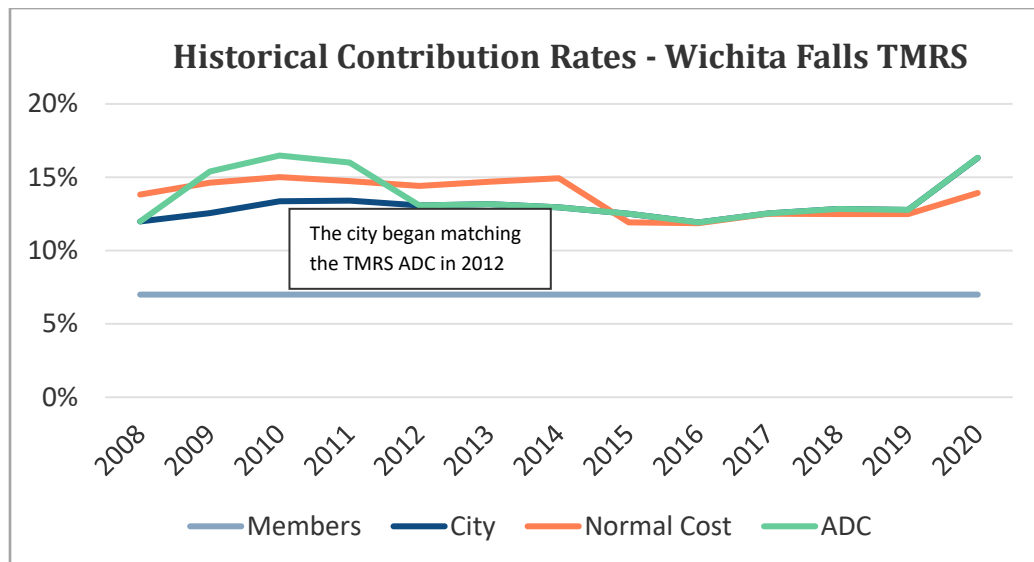
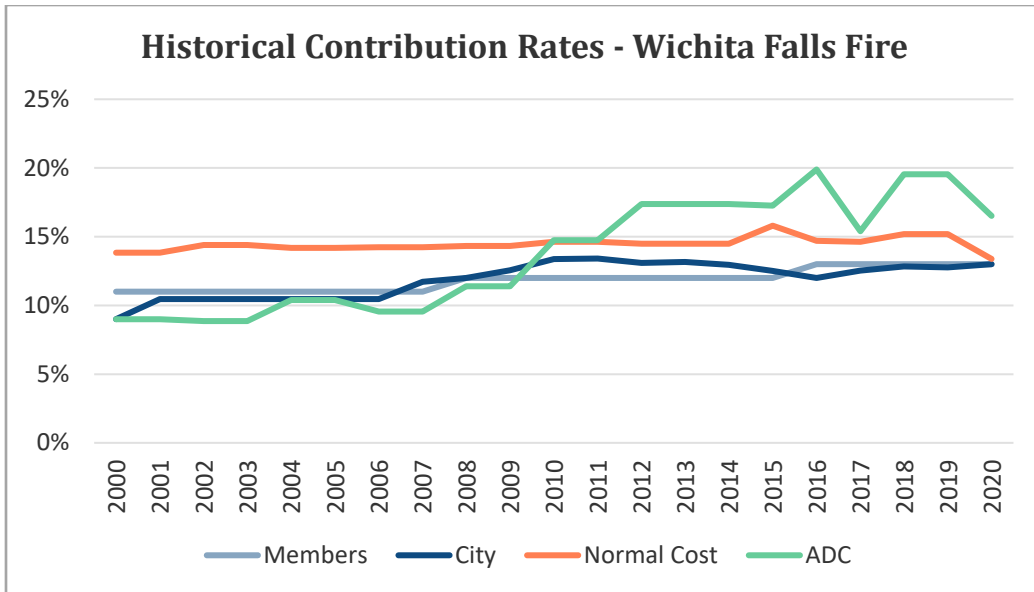
While investment returns have kept pace with assumptions, contributions have not kept pace with Wichita Falls Fire's funding needs. The PRB analyzed the annual changes in unfunded liability to allocate



the changes into three categories, as shown in the graph, *Sources of Change in UAAL 2011-2022*. The first category, *investment return lower than assumed*, was calculated by comparing the actuarial value of assets to the prior year assets, contributions, disbursements and expected returns. The second category, *contributions lower than normal cost + interest on UAAL*, was calculated by comparing the actual contributions to the amount that would have been necessary to have no expected increase in the unfunded liability. Any remaining changes in unfunded liability during the period, such as assumption changes and demographic experience different than assumed, were labeled as *Other*.

*City contribution levels have not been based on the system's actual funding needs.*

From 2001 to 2019, the city matched its contribution to the Wichita Falls Fire fund to the Texas Municipal Retirement System (TMRS) contribution rate for Wichita Falls municipal employees. Until the 2008-2009 financial crisis, city contributions kept pace with the actuarially determined contribution (ADC) necessary to fully fund the plan within 30 years. When the TMRS contribution rate increased substantially in 2020, the city stopped matching the TMRS contribution rate for Wichita Falls Fire. The next two graphs show contribution rate trends for both members and the city over the last 20 years for both Wichita Falls Fire and for municipal employees covered through the city’s TMRS plan.



This failure to adjust contribution rates for Wichita Falls Fire exacerbated the gap between actual contributions and the system's ADC value, but matching contribution rates for firefighters to the contribution rates for municipal employees is not a prudent methodology for funding a pension benefit. Firefighters in general have lower turnover than municipal employees resulting in a larger portion of the membership ultimately receiving retirement benefits. Due to the physical demands of the job, firefighters typically retire at earlier ages than municipal employees, allowing a longer time to fund a municipal employee benefit that will be paid over a shorter period. For example, a long-service firefighter would

likely retire by 57 years old, while a municipal employee with the same years of service may work into their seventies.<sup>7</sup>

As a result, for each dollar of monthly retirement benefits at expected retirement age, the city can pay less per year for municipal and police employees than firefighters to fund the same benefit. Additionally, the structure makes the TMRS contribution rate unsuitable as a proxy to determine contributions for a retirement system with a completely different governing statute, plan structure, membership population, and investment history.

TMRS uses an actuarially determined contribution based on its own funded status and plan provisions. The actuarially determined contribution is calculated as the sum of the normal cost and an amortization of the unfunded liability. Since Wichita Falls' TMRS plan is better funded than the Wichita Falls Fire plan, with a roughly 84 percent funded ratio, its ADC is based on an amortization of a small unfunded amount. An ADC for Wichita Falls Fire would also have to fund the amortization of a larger unfunded amount since the funded ratio is only 65 percent.

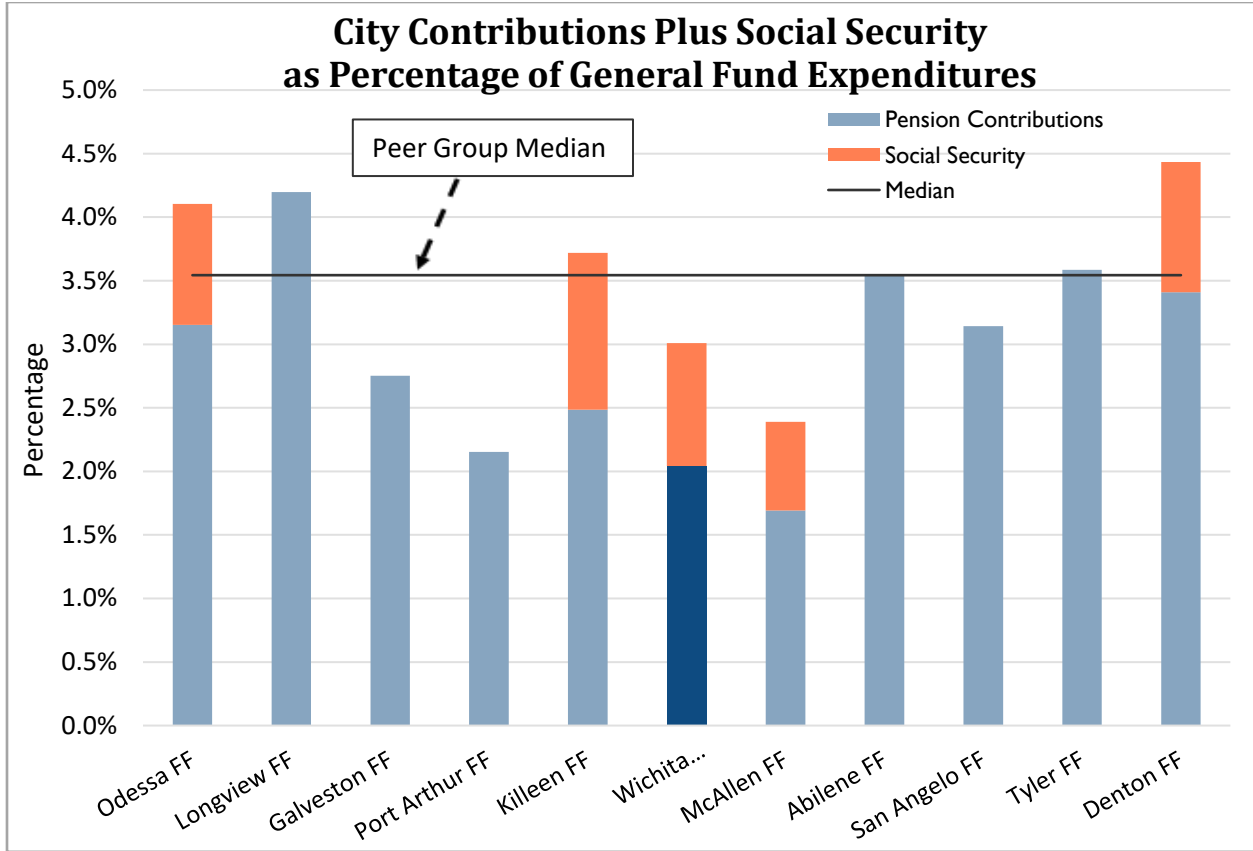
The 2008-2009 financial crisis also had a relatively minimal impact on TMRS and its member plans since the fund was not invested in equities at that time, while the Wichita Falls Fire plan had a substantial weight in equities. With those two vastly different allocations, the 2008 return was more than 12 percent lower for Wichita Falls Fire than for TMRS. Prior to the 2008 financial crisis, the Wichita Falls Fire plan ADC and Wichita Falls TMRS plan ADC were roughly equal. Afterwards, the city continued providing the same contribution rate to the two funds despite the ADC disparities from 2008 to 2019. Because the city continued to contribute far less than the Wichita Falls Fire ADC each year, the ADC continued to increase as a percentage of payroll. Then in 2020, when the Wichita Falls Fire plan ADC converged again with the Wichita Falls TMRS plan ADC, the city paid the ADC for its TMRS plan but did not pay the same for the Fire plan.

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<sup>7</sup> A Wichita Falls firefighter aged 57 with 25 years of service is assumed to retire with 100 percent probability based on the assumptions included in the 2022 actuarial valuation. A similarly situated municipal or police employee benefitting from TMRS has only a 13 percent chance to retire, leaving a high likelihood the member will retire at a later age. In fact, even a 74-year-old employee with TMRS benefits has only a 30 percent chance to retire that year. TMRS benefits for Wichita Falls apply to both municipal employees and police. Police officers in the TMRS may share many retirement characteristics, such as average retirement age, with firefighters since they are also public safety employees. However, the civilian municipal employees in the same retirement system will affect the average characteristics of the Wichita Falls TMRS plan membership compared to Wichita Falls Fire.



The City of Wichita Falls allocates a similar percentage of the general fund expenditures to firefighter payroll, but the city contributes substantially less than peer firefighter pensions. If the city raised the pension contributions from its current 2 percent of general fund expenditures to the peer average of roughly 3 percent, the new city contribution rate as a percent of payroll would increase from 13 percent to 19.5 percent. The graph, *City Contributions Plus Social Security as Percentage of General Fund Expenditures*, accounts for differences among cities in terms of Social Security participation. Wichita Falls Fire and four peer systems participate in Social Security. Adding the 6.2 percent of Social Security payroll contribution for Wichita Falls Fire and its peer systems — Odessa Fire, Killeen Fire, McAllen Fire, and Denton Fire — brings the total city contribution closer to the peer median — 3 percent of general fund expenditures for Wichita Falls Fire versus 3.5 percent for the peer group median. Even factoring in Social Security payments, Wichita Falls still pays less into the fire pension fund than peer cities.



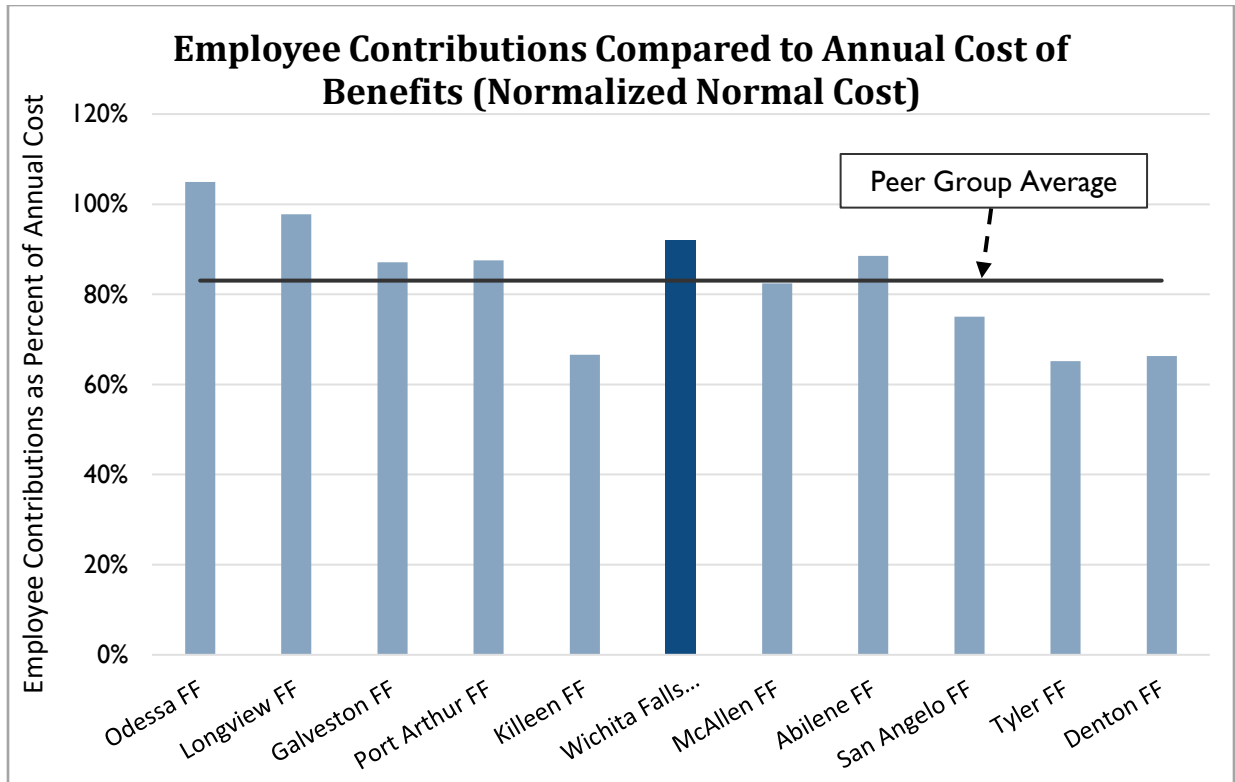
*Wichita Falls Fire members already contribute 92 percent of the normal cost of their benefits.*

Since pension benefits are a form of non-wage employer-sponsored compensation used to supplement salary, it is expected that members will pay a portion, but not all, of the cost to fund their benefits.<sup>8</sup> The normal cost is a good proxy for the expected annual cost of the pension benefit. The graph, *Employee Contributions Compared to Annual Cost of Benefits*, below compares the normal costs of peer systems to compare the annual cost of benefits, which were normalized to all use a 7.5 percent discount rate.<sup>9</sup> On average, members in peer plans pay 83 percent of the normal cost, while Wichita Falls Fire members pay 92 percent.

Although contributions must be increased to meet the system's funding needs, members should not be expected to pay more than the full cost of their benefits. Doing so creates intergenerational equity issues since current members would be paying for the benefits of past members in addition to full cost of their own. To mitigate this intergenerational equity issue, the city will likely need to consider paying the bulk of the additional contributions.

<sup>8</sup> "Glossary," United States Bureau of Labor Statistics, Accessed July 26, 2022, <https://www.bls.gov/bls/glossary.htm>

<sup>9</sup> Based on the present value sensitivity of a 38-year-old active member retiring at eligibility age, PubS\_2010 mortality table with generational improvements based on scale MP2020 using factors calculated on the Annuity Factor Calculator on the Society of Actuaries website. Accessed July 26, 2022, <https://afc.soa.org/#Calculator>.



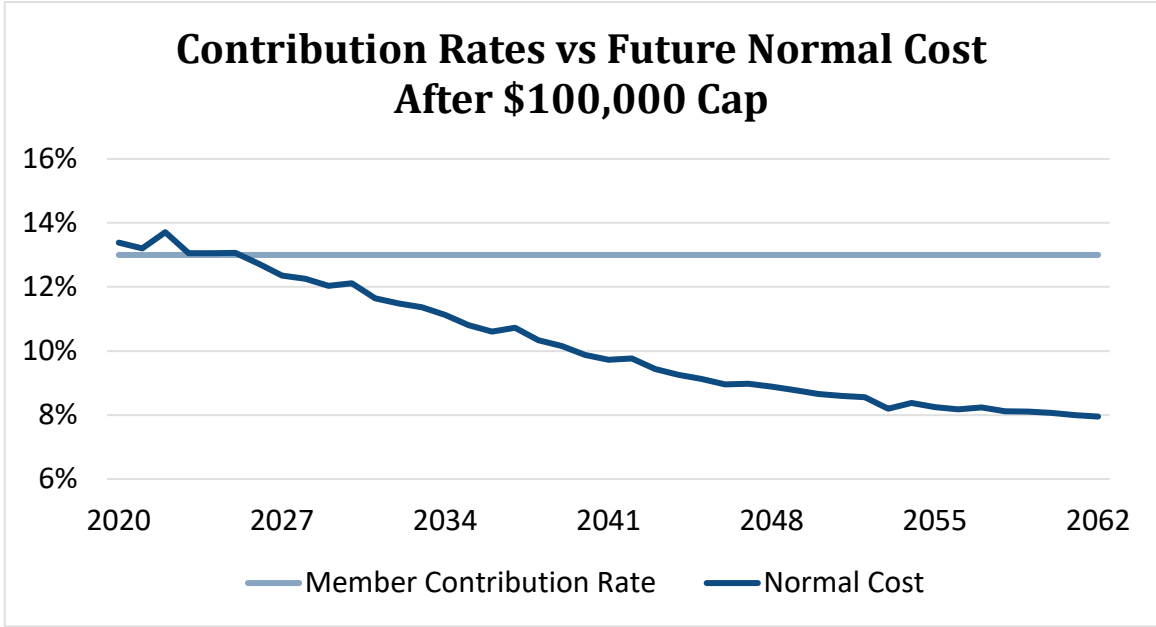
**Wichita Falls Fire’s \$100,000 benefit cap used to decrease its amortization period does not appear sustainable and creates intergenerational inequity.**

Following the original FSRP submitted in 2016, the system submitted a revised FSRP in 2019 consisting of three plan changes:

- Changed the normal retirement benefit to no longer continue partial payment to the surviving spouse after the retiree’s death.
- Increased the period of final average compensation from three years to five years for members hired prior to April 21, 2016.
- Implemented a maximum accrued benefit cap of \$100,000 per year, not indexed to inflation.

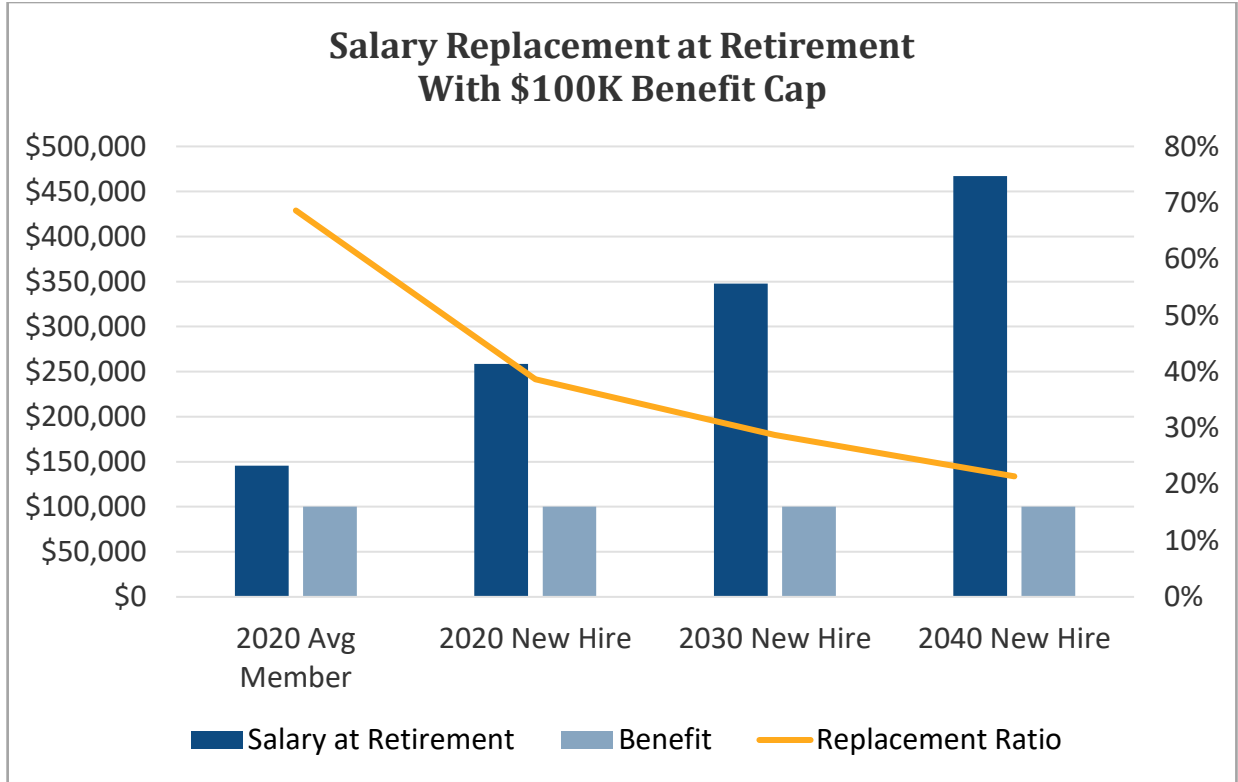
The main provision that decreased the amortization period from infinite to 43 was the \$100,000 benefit cap. The cap is unlikely to be sustainable for two main reasons: the benefit for future hires will be worth less than the accumulated member contributions and the benefit will no longer replace a substantial percentage of a member’s salary in their retirement years.

Members are already paying nearly the full value of their benefits. Now that the cap has been implemented, future hires are projected to pay 8 percent of salary to fund their own retirement benefits, plus an additional 5 percent toward assets to fund the plan’s unfunded liability, which for Wichita Falls Fire is generally the cost of benefits for firefighters already retired. The graph, *Contribution Rates vs. Future Normal Cost After \$100,000 Cap*, shows this trend over time because the amount of pay future members receive is assumed to continue increasing even as their benefits remain capped. In essence, the future members will be paying for their own benefits plus the benefits of the previous generation.



A defined benefit pension plan with a final average pay formula such as Wichita Falls Fire is typically designed to provide a reliable salary replacement in the member’s retirement years. Under the Wichita Falls Fire formula prior to the 2018 changes, a member who worked 30 years from age 25 to 55 would receive 75 percent of their final average compensation in each year of retirement. The average current member in the 2020 actuarial valuation was 41 years old with 16 years of service, making \$85,000. They would be projected to earn \$146,000 at age 55 based on the valuation individual pay increase assumption. With the cap, they would be paid 68 percent since their benefits cannot exceed \$100,000.

A 2020 new hire, on average, earns \$55,000 at age 25 and would be projected to earn \$259,000 at retirement based on the valuation individual pay increase assumption. Rather than receiving 75 percent of their final average salary, which would be \$194,250, they would receive only 39 percent per year at retirement due to the cap. As shown in the graph below, the current plan design and assumptions mean the value of a member’s benefit will decrease significantly over time. Indeed, the benefit cap degrades the salary replacement level for future members to just over 20 percent for a new hire in 2040.



This plan design appears to be unsustainable — as the replacement ratio decreases over time, the city will find it more and more difficult to hire and retain firefighters. At least one other Texas Local Fire Fighter Retirement Act (TLFFRA) system within a similar distance to the Dallas-Fort Worth metroplex recently had to consider benefit increases in response to current and prospective firefighters choosing to work for nearby fire departments where they could expect better benefits for lower contributions.

**Actuarial assumptions and methods need to be reevaluated to align with actual experience and realistically assess Wichita Falls Fire’s contribution needs.**

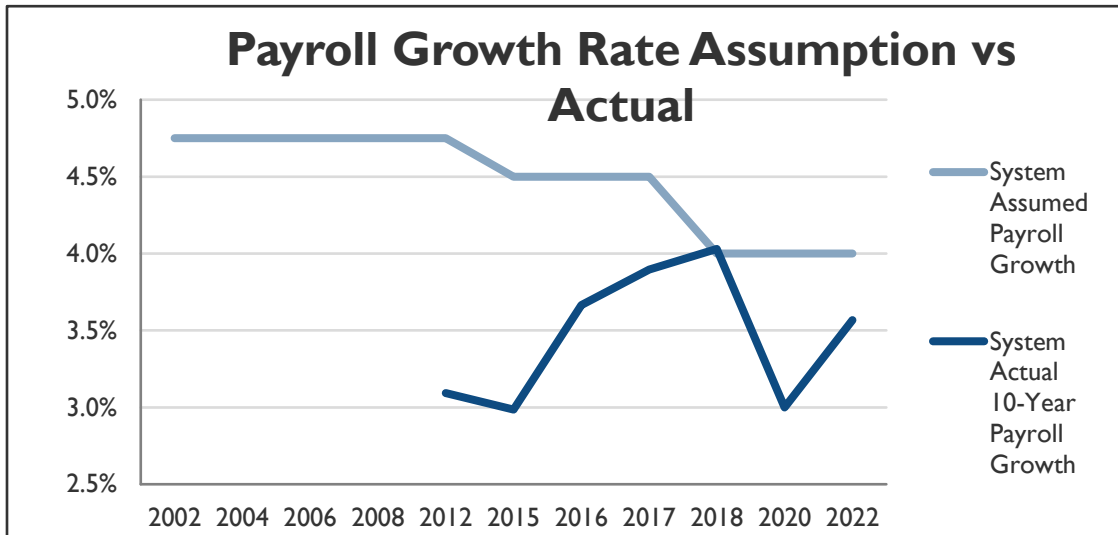
To accurately forecast pension funding needs, assumptions used should be realistic. The following discussion describes multiple assumptions and methods Wichita Falls Fire should reevaluate to ensure these assumptions are updated based on plan experience, benefit changes, city demographics, and other relevant factors.

*Payroll growth assumption is not supported by plan experience or city demographics.*

The 2010 U.S. Census estimated that Wichita Falls, Texas had a population of 104,553 and had grown 0.3 percent in the previous decade.<sup>10</sup> The 2020 Census showed a population of 102,316, a decrease of 2.1 percent. This data suggests the city is not growing enough to support a growing fire department, which is demonstrated by the number of active firefighters since 2000. The active firefighter counts between 2000 and 2020 has steadily remained between 150 and 160 individuals.

<sup>10</sup> "Quick Facts: Wichita Falls city, Texas," United States Census Bureau, Accessed July 26, 2022, <https://www.census.gov/quickfacts/wichitafallscitytexas>.





Since the payroll growth assumption combines individual salary increases with future headcount projections, such a steady headcount does not support an aggressive payroll growth assumption. Given the population trends, it is reasonable to assume Wichita Falls Fire will experience future payroll growth lower than its current assumption. The payroll growth assumption was decreased twice in the last ten years, from 4.75 percent to 4.5 percent in 2015 and from 4.5 percent to 4 percent in 2018; the assumption remains, however, almost a full 100 basis points above the average for Texas public retirement systems. Nonetheless, the assumed growth rate continues to appear unreachable given that the 10-year payroll growth experience has reached 4 percent only once since 2010.<sup>11</sup> The graph below shows how the plan’s payroll growth experience compares with actual growth over time.

An assumed payroll growth rate of 4 percent would generally imply an expected steady future increase in the number of firefighters. If the city were growing and supporting that population growth with new fire stations, a greater-than-average growth assumption would make sense. The census, however, showed no population increase from 2000 to 2020.<sup>12</sup> The city is unlikely to face a significant need for additional

Actuarial assumptions that appear as outliers when compared to other systems are not necessarily unreasonable.

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For example, another TLFFRA system also has a payroll growth assumption of 4 percent, which is higher than most other Texas public retirement system’s assumptions. The city’s population growth is also much higher than most other Texas cities. Its population grew from 56,000 in 2010 to 90,000 in 2020. As long as the city’s population growth is expected to continue and additional firefighters will be needed, such a payroll growth assumption may continue to be reasonable in the future.

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<sup>11</sup> When a 10-year period was unavailable, 11 years were used.

<sup>12</sup> "Quick Facts: Wichita Falls city, Texas," United States Census Bureau, Accessed July 26, 2022, <https://www.census.gov/quickfacts/wichitafallscitytexas>.

firefighters without an increase in the city’s population.

*Demographic assumptions should be updated to reflect expectations based on current plan provisions including the \$100,000 benefit cap.*

Actuarial Standard of Practice (ASOP) 35 states that the actuary should account for certain factors when setting demographic assumptions, including “any features of the plan design or change in the plan design that may influence the assumption.”

Wichita Falls Fire did not change the assumptions after implementing the \$100,000 cap. As the pension benefit decreases in value from replacing 68 percent of salary to 21 percent of salary over time, the system has assumed that most firefighters will continue to be willing to work a long career in Wichita Falls, contributing a level of salary far exceeding the value of the benefits they will receive.

By keeping each of the payroll growth assumption and pre-retirement termination assumption level in the open group projection, the system has effectively assumed that the level of pension benefits plays no role in the recruitment and retention of firefighters. Nonetheless, these firefighters have other options for employment and can easily choose to either join a fire department in another city with more valuable benefits or accept a position in a different industry in Wichita Falls and the surrounding area. Even if the job required moving to a new location, it is reasonable to assume the Wichita Falls firefighters could be enticed by employment opportunities that came with a pension benefit worth three to four times the value of what they could expect from Wichita Falls Fire for the same level of contributions. Furthermore, the 20-year vesting requirement is unlikely to discourage early termination since, by terminating, the firefighters could take a refund of contributions worth more than the benefit they would receive after vesting.

Accordingly, the system's plan design appears unsustainable. Eventually, the system and city will likely need to modify the plan’s benefits and financing arrangements.

*Mortality improvement assumption underestimates the normal cost.*

The system's mortality improvement assumption is one of the most aggressive among Texas public retirement systems. A mortality improvement measures the increased likelihood from one year to the next that a member or retiree at a given age will live another year. The more years of mortality improvements that are built into the valuation, the longer a retiree is expected to continue receiving monthly pension payments from the system.

Life Expectancies for a 65-Year-Old Male Retiree From Select Mortality Tables		
Mortality Table <sup>13</sup>	Year	Life Expectancy
UP	1984	15
UP	1994	17
RP	2006	19
PubG	2010	20

<sup>13</sup> These are abbreviations for mortality tables commonly used by actuaries in the past.

As shown in the table, *Life Expectancy table for a 65-year-Old Male Retiree*, the expected lifetime of a 65-year-old male retiree has steadily increased since the 1980s, from 15 years in the 1984 table to 20 years in the 2010 table, a 33 percent increase. Actuaries have responded to this trend by including a mortality improvement assumption in actuarial valuations.

Life Expectancies for a 25-Year-Old Male Firefighter Projected to Retire at 65		
Mortality Table <sup>13</sup>	Improvements	Life Expectancy
PubG2010	None	20
PubG2010	5-Year Static	21
PubG2010	Generational	24

While most other systems used generational mortality improvements, Wichita Falls Fire used a static improvement over five years. In the 2010 table shown, a 25-year-old firefighter projected to retire at 65 would be expected to receive benefits for 24 years with generational improvements but only 21 years with the Wichita Falls Fire approach. The expected lifetime would be 20 years with no mortality improvements assumed.

As the table, *Mortality Improvements for a 40-Year-Old Firefighter Generational Approach vs. Wichita Falls Fire Approach*, demonstrates, with 40 fewer years of improvements for the 85-year-old, the Wichita Falls Fire valuation assumes a shorter lifespan and significantly fewer payments to the retiree. This produces a materially lower normal cost than the generational approach. The normal cost is estimated to be 2 percent of pay lower for a 40-year-old active firefighter and 4 percent of pay lower for a 25-year-old due to this approach.

Mortality Improvements For a 40-Year-Old Firefighter Generational Approach vs. Wichita Falls Fire Approach			
Age	Years to Reach Age	Generational Years of Improvement	Wichita Falls Years of Improvement
55	15	15	5
60	20	20	5
65	25	25	5
70	30	30	5
75	35	35	5
80	40	40	5
85	45	45	5

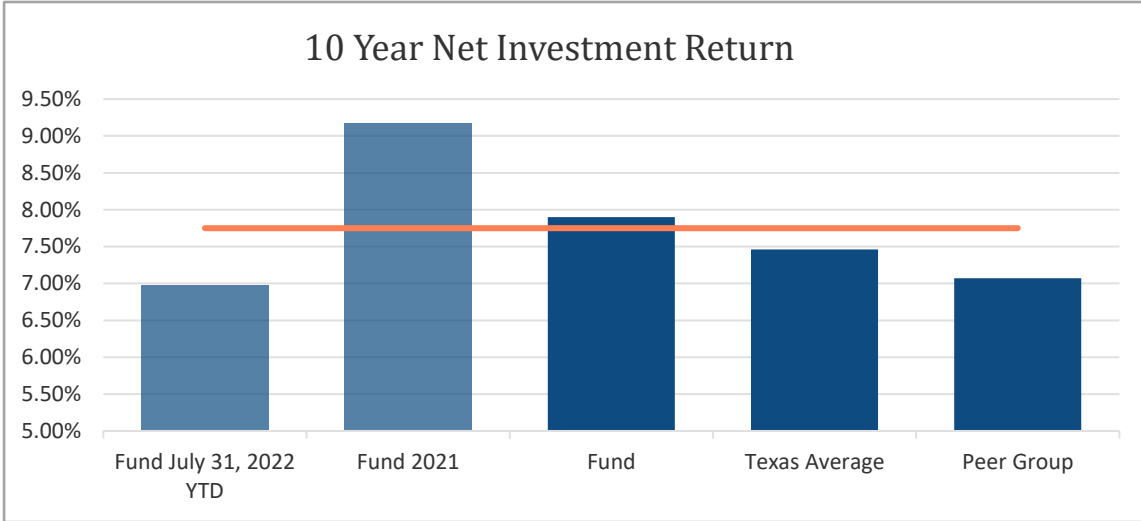
*Wichita Falls Fire uses market value of assets instead of smoothing.*

Wichita Falls Fire currently uses fair market valuation method, which means that the actuarial value of assets equals the market value of assets. The smoothing method would enable Wichita Falls Fire to phase in investment gains and losses over a fixed period, which is typically five years. Smoothing assets has the effect of leveling out sharp changes in the plan’s funding level and required cost, and would also make the system less susceptible to falling out of compliance with their FSRP due to a market event.

**Wichita Falls Fire’s investment program has consistently met the system’s return assumption but will need to prepare for changes based on maturing demographic trends.**

Overall, the system’s investment program has performed well while keeping investment expenses reasonable. Consistent investment performance with small drawdowns have provided stability to the assets by meeting its 7.75 percent assumption over time.

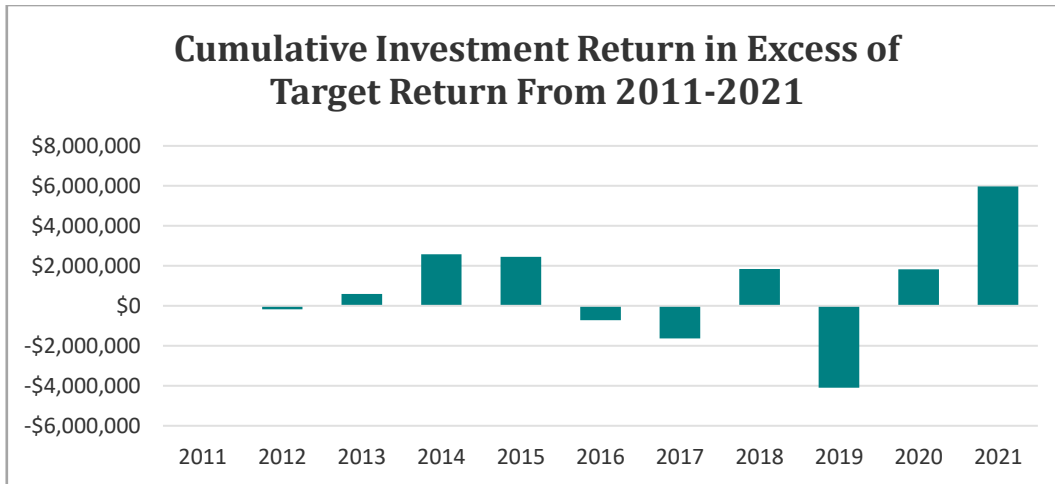
The system has even exceeded the average returns of both its peer group and Texas public retirement systems, as shown in the graph, *10-Year Net Investment Return*. Meeting return assumptions over the long term benefits the fund as investment returns typically provide roughly 60 percent of pension revenues, which makes it a crucial source for paying benefits.<sup>14</sup>



*The Fund, Texas average, and peer group 10-year net investment returns use only 2020 data. The Fund 2021 is the fund's return for 2021. The Fund July 31, 2022, YTD is what the funds 10-year net investment return would be if nothing changes from that last date.*

Consistent returns with minimal drawdowns are more important in the long run than having a handful of high return years. Pensions rely on the assumption that investments will, over a market cycle, meet their target return. Any year they return less than expected requires that missed gain in assets to be made up in the future, including the compounding growth that would have come from the missed gain. Over the past decade, Wichita Falls Fire has six times either met or drastically exceeded its return assumption. Otherwise, it had two years with positive returns with small underperformance compared to the target return, one year with less than 1 percent in returns, and only one negative-return drawdown year, as shown in the accompanying graph.

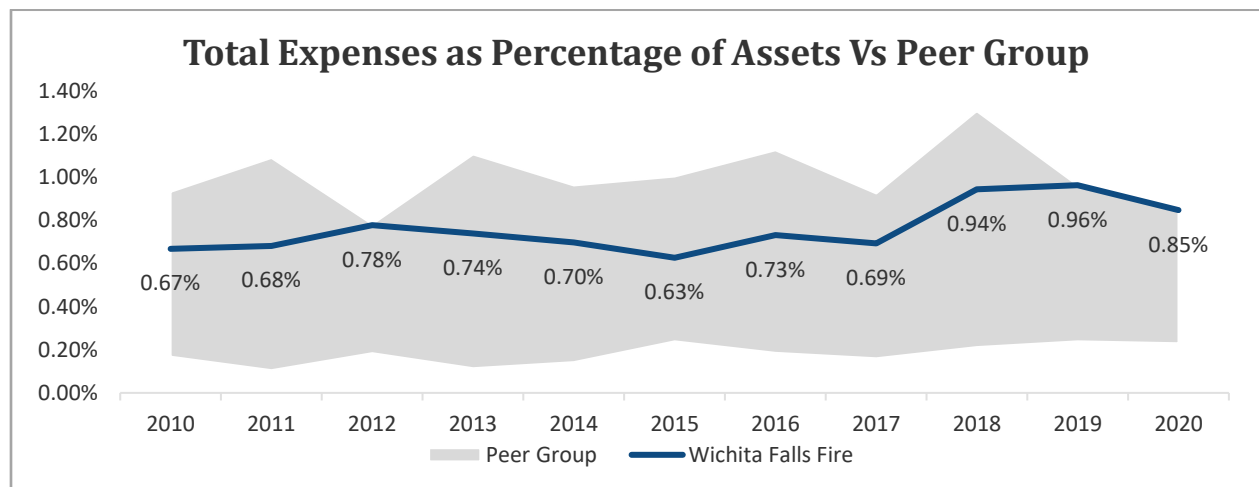
<sup>14</sup> "Investment," National Association of State Retirement System Administrators, Accessed July 26, 2022, <https://www.nasra.org/investment>.



The system’s investment performance has remained consistent, with minimal downside, and has generally kept asset returns in a surplus over assumptions. This excess gives the system more assets capable of growing and supporting benefits and contributes to its ability to reach a fully funded status.

*Wichita Falls Fire’s total investment expenses, while at the top of its peer group, are still reasonable.*

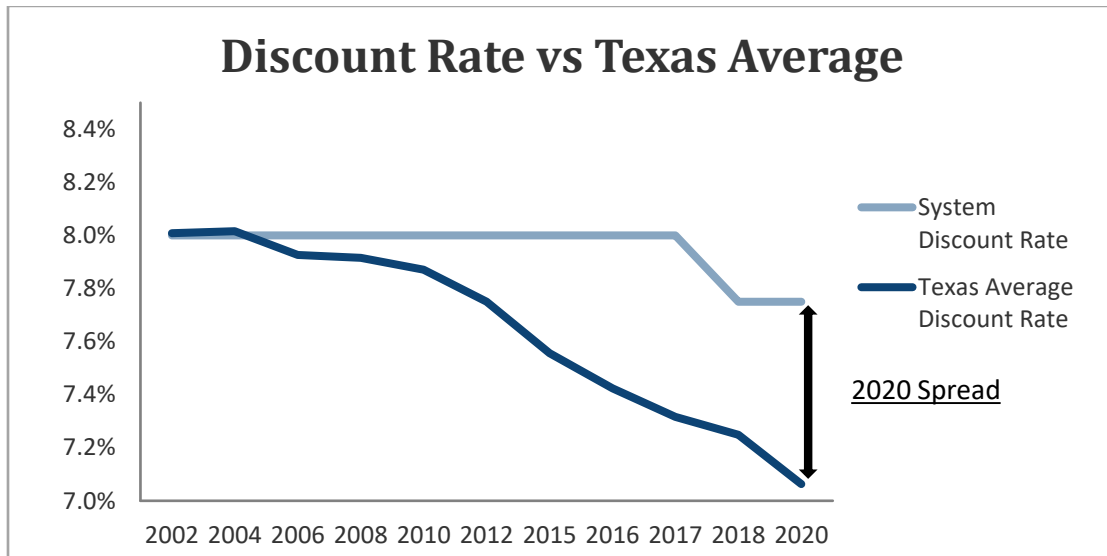
It is evident that the system has, over the years, made investment decisions that have kept expenses in line with peers and the national averages, which is usually around 0.6 percent.<sup>15</sup> The accompanying graph, *Total Expenses as Percentage of Assets Vs. Peer Group*, shows the system’s investment expenses compared with peers. Low investment expenses help maximize investment returns and make it easier to meet return assumptions. Investment expenses are one of the few factors over which a pension fund has considerable control, and Wichita Falls Fire’s management of fees suggests the overall investment program is following best practices by actively monitoring fees.



<sup>15</sup> 2021 NCPERS Public Retirement System Study, National Conference on Public Employee Retirement Systems and Cobalt Community Research (February 2022), Accessed July 26, 2022, <https://www.ncpers.org/files/ncpers-public-retirement-systems-study-2021.pdf>

The system has kept fees in a narrow range over the past decade with elevated fees only beginning in 2018. The elevated fees are a result of allocations into alternative investments, such as private equity, that include performance fees. These performance fees generate higher expenses but are justified by the performance rates; the system is paying larger fees only because of the investments’ large out-performance. Additionally, the system allocates 17.75 percent of their equity investments into a passive index fund with a very low net expense ratio of 0.03 percent. The asset allocation balance of returns, risk, and fees is an important design factor that needs to fit a system if it is to be properly managed. Wichita Falls Fire’s allocation is in line with the average Texas retirement system as the alternative and real estate investments, which normally are more expensive, do not represent an overweight proportion of the assets.<sup>16</sup> In addition, the balance of passive investments compared to high fee alternatives allows the system to participate in the equity market, invest in higher expense active investments that are more likely to provide alpha, and keep the overall portfolio expenses at a reasonable level.

*The system’s return assumption may soon need adjustment due to shifting membership demographics, including a growing retiree headcount, demanding more conservative investments.*

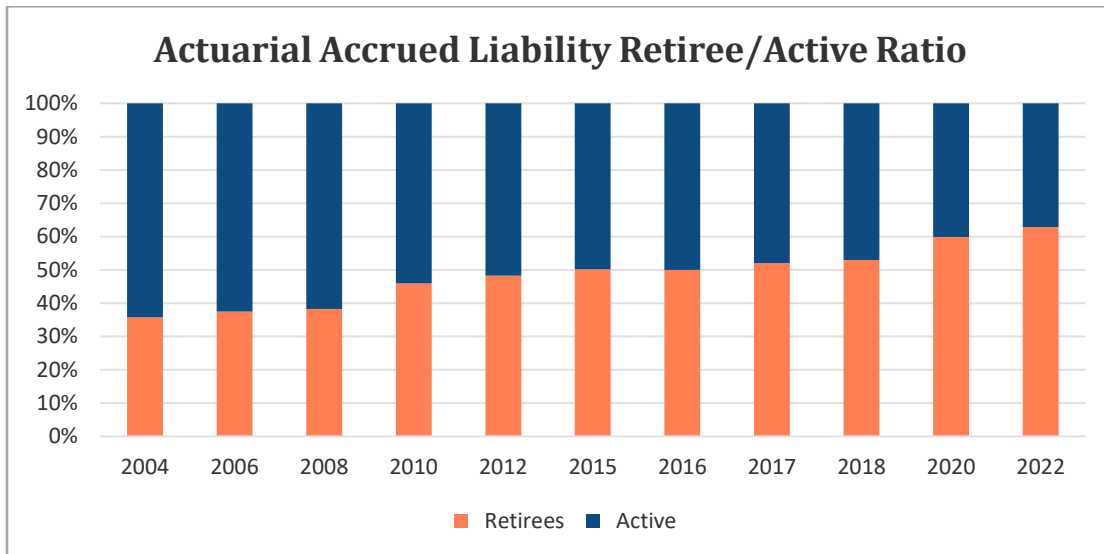
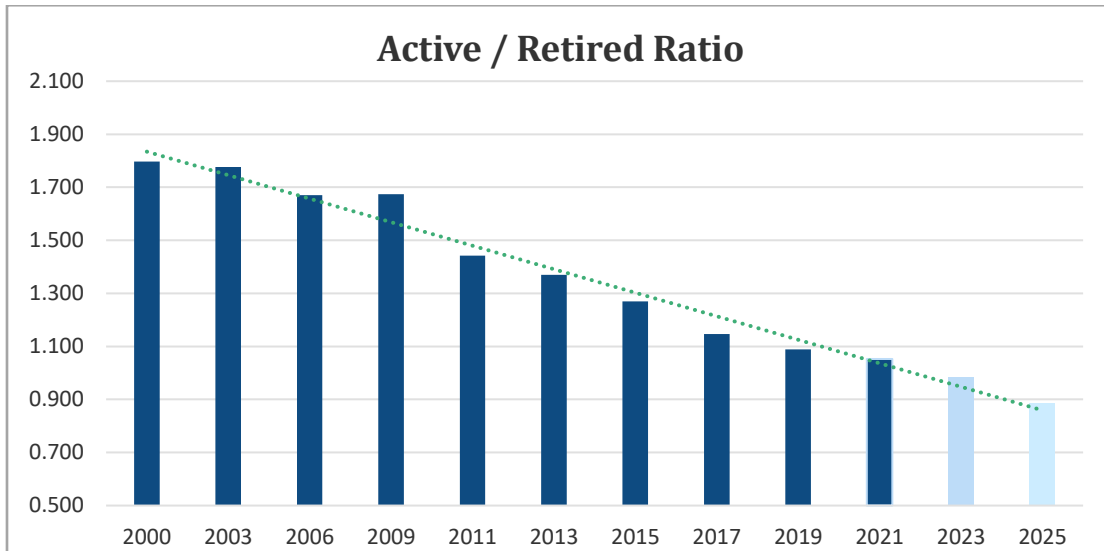


Wichita Falls Fire uses a 7.75 percent investment return assumption, which is somewhat aggressive for current capital market conditions that assume a rate closer to 7 to 7.25 percent.<sup>17</sup> The graph, *Discount Rate vs Texas Average*, compares the system’s return assumption with the overall Texas pension system average since 2002. The current assumption is still reasonable as the system targets a 60/40 portfolio with its “safer” 40 percent of investments partially replaced by investments in alternatives. Additionally, the system's membership is largely younger, with a relatively high proportion of recently retired or active

<sup>16</sup> See appendix for Wichita Falls Fire’s and peer group systems asset allocations.

<sup>17</sup> *Survey of Capital Market Assumptions: 2021 Edition*, Horizon Actuarial Services, LLC, Accessed July 26, 2022, [https://www.horizonactuarial.com/uploads/3/0/4/9/30499196/rpt\\_cma\\_survey\\_2021\\_v0804.pdf](https://www.horizonactuarial.com/uploads/3/0/4/9/30499196/rpt_cma_survey_2021_v0804.pdf); *2021 NCPERS Public Retirement System Study*, National Conference on Public Employee Retirement Systems and Cobalt Community Research (February 2022), Accessed July 26, 2022, <https://www.ncpers.org/files/ncpers-public-retirement-systems-study-2021.pdf>.

members; this lower membership age temporarily allows a more risk-aggressive allocation. However, demographic trends show that the predominately younger, active membership is aging, and the retired membership is quickly becoming the largest group.



The previous two charts show that the age of the average member grows with the ratio of active to retiree members. This means the actuarial accrued liability (AAL) of retirees further eclipses that of the younger active members, which will in turn impact investment decisions.

Investment portfolio allocation adjustments are a normal aspect of how pension funds mature, but it does mean that the current Wichita Falls Fire investment strategy is not likely to be sustainable in the long term. The system's AAL is currently 62 percent attributable to the retirees of the plan, and the retiree portion is likely to continue growing as shifting demographics make current assumptions less suitable. With all things being the same, every year that the active-to-retiree ratio remains below one, aging retirees will represent a larger portion of the AAL and assets. For the portion of assets supporting active

member liabilities, there is time to allow aggressive investment in assets seeking long-term growth because benefit payments for active firefighters will begin years or decades in the future. However, benefits for retirees are already in payment. The assets used to support those payments should be allocated to provide more consistent near-term returns or risk liquidity issues. This typically means a greater share of a system's portfolio should be invested in more conservative asset classes as retirees become a greater share of the liability; ensuring money is available to pay benefits each month takes priority over higher returns. This shift would necessitate more conservative investment decisions, which would most likely lead to lower investment return assumptions.

The growth in average membership age may be slowed or reversed in the future by additional hiring or local population growth, but the census results discussed previously in this report suggest this scenario is unlikely. Instead, the trend could likely be compounded by difficulty with hiring and retention related to the benefit cap, which could potentially necessitate investment changes sooner. The corresponding lower expected investment return would be exacerbated by forecasted capital market returns of roughly 7 percent for the next decade.<sup>18</sup>

Between the natural shift in priorities as average membership age increases, an uncertain stock market, and potential difficulty hiring, the system will likely find it necessary to reallocate its assets to a more conservatively invested portfolio with a decreased expected return on assets within the next 10 years, which will further increase the contribution needs. Fortunately, the investment program has shown it can meet current return objectives and manage expenses appropriately. This knowledge will be useful to navigate unpredictable markets and the changing needs of the system as membership ages, but it cannot replace sufficient contributions in the long term. An investment program needs to be adequately funded to provide the benefits that are promised. If benefits are not being prefunded appropriately, the investment program is starting with a disadvantage. Rather than contributions being given the time to generate returns, they will go towards backfilling the hole left by missed growth on past contributions or paying retiree benefits that were not prefunded.

## Recommendations

### **Consider options to increase contributions to offset previous underfunding.**

In general terms, the City of Wichita Falls and Wichita Falls Fire need to work together to determine how to address the system's deteriorating funded status, which should include increased contributions. The PRB has developed multiple scenarios as a resource for the city and the system that incorporate other relevant factors, such as potentially removing the benefit cap and modifying assumptions. These scenarios are for informational purposes only and are not meant as recommendations for specific contribution levels or assumptions.<sup>19</sup>

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<sup>18</sup> *Survey of Capital Market Assumptions: 2021 Edition*, Horizon Actuarial Services, LLC.

<sup>19</sup> The projections shown in this section are meant to demonstrate the types of future events to consider when developing a contribution strategy, and how contributions may need to increase when such future events are considered. They are not intended for any other purpose. The projections are estimates based on limited information available including but not limited to a projection of normal costs from the January 1, 2020, actuarial



It is important to consider potential future decreases in assets and increases in liabilities when evaluating the effectiveness of a potential contribution level. With that in mind, four scenarios illustrate projected changes to assets and liabilities, with the following changes considered:

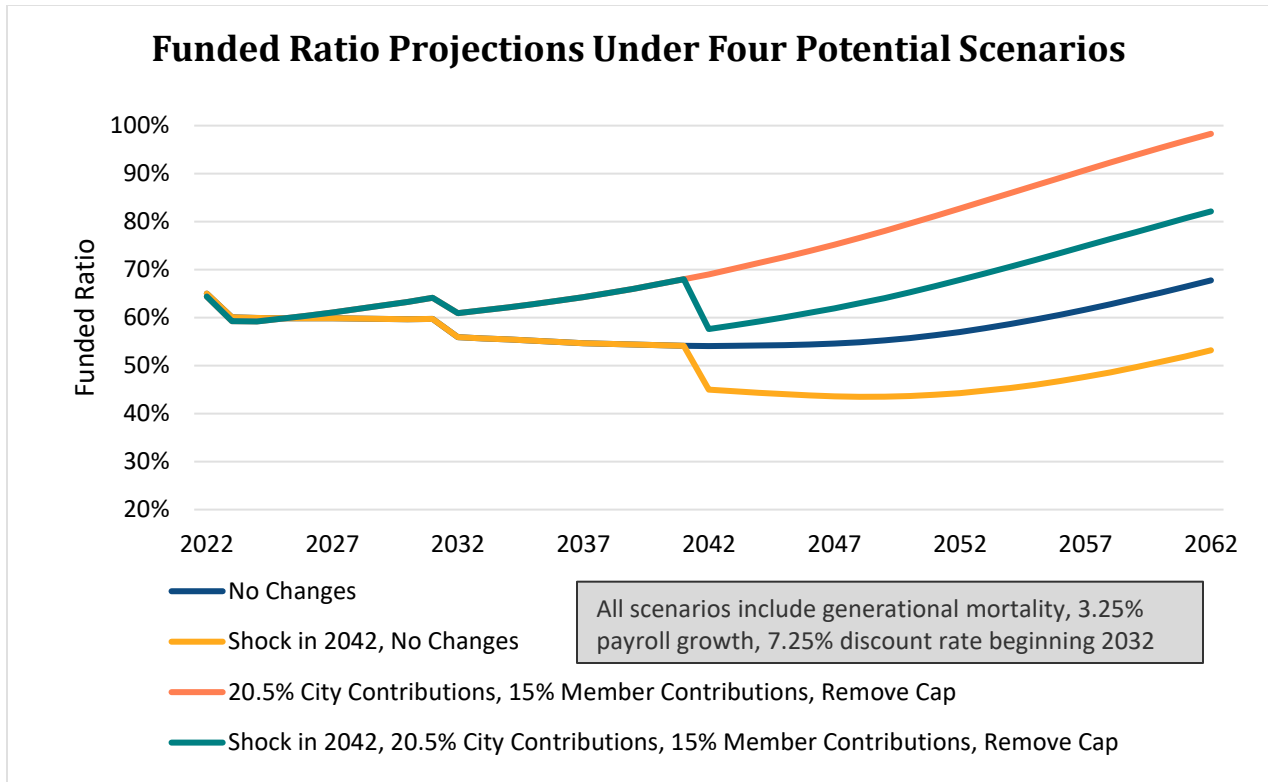
- Decrease in assets from \$62.4 million on January 1, 2022, to \$59 million on January 1, 2023, to reflect known bear market based on assets as of July 31, 2022.
- Observation of a 10 percent decrease in assets in 2042 because of a possible market event.
- Increases to city and member contributions.
- Removal of the \$100,000 cap on benefits.
- Reducing the payroll growth assumption to 3.25 percent.
- Changing asset allocation in 2032 resulting in a 7.25 percent expected return thereafter.
- Changing the mortality improvement assumption to reflect generational mortality improvements.

Four Potential Funded Status Outcomes Taking Into Account Expected Future Changes							
Scenario	20% City Contributions	15% Member Contributions	Remove \$100,000 Cap	Asset Decrease in 2042	Generational Mortality	3.25% Payroll Growth	7.25% Discount Rate in 2032
Blue					✓	✓	✓
Yellow				✓	✓	✓	✓
Orange	✓	✓	✓		✓	✓	✓
Teal	✓	✓	✓	✓	✓	✓	✓

Due to the rapid maturing of the plan toward liabilities skewed heavily toward retirees, the system is expected to reallocate assets and reduce the discount rate by 2032. To meet the new statutory requirements and avoid preparing a new FSRP, the system must have an amortization period of 30 or fewer years when the discount rate is reduced.<sup>20</sup> Therefore, the system should develop a funding policy that would fully fund the liability by 2062 under those conditions. The orange line in the graph above depicts a scenario that would meet these criteria.

valuation provided by the system’s actuary and the assets and liabilities shown in the January 1, 2022, actuarial valuation. The ultimate level of contributions should be determined based on projections and analysis provided by the system’s actuary.

<sup>20</sup> If the system’s funding period is above 30 years but below 40 years, the system would not trigger an FSRP immediately unless the funded ratio at that time was below 65 percent. If the system is not affected by the immediate triggers, it will have two or three actuarial valuations before triggering an FSRP. Depending on the system’s valuation schedule, the system would have an additional three to six years to reduce the funding period before triggering an FSRP under the new requirements. More information can be found on the PRB website: <https://www.prb.texas.gov/actuarial/funding-soundness-restoration-plan-fsrp/>.



The two scenarios with additional contributions, orange and teal, reach funding levels between 80 percent and 100 percent even with the \$100,000 cap removed. The city alerted staff that current budget discussions for fiscal year 2022-2023 includes a planned contribution increase from 13.25 to 16.18 percent. The two scenarios represented by the yellow and blue lines reflect contribution levels after the city’s upcoming increase to 16.18 percent of payroll and reach funding levels between 50 percent and 70 percent when the normal cost remains at the level shown in the 2022 actuarial valuation.

The adequacy of potential contribution rates must be tested with funded status projections based on reasonable future expectations. All scenarios include a change to generational mortality, actual payroll growth of 3.25 percent per year, and an asset allocation change in 2032 causing the expected rate of return to decrease 50 basis points.

While the above scenarios reflect one potential asset shock in 2042, it is recommended that the system perform regular stress testing reflecting multiple potential iterations of economic, demographic and contribution conditions. Stress testing should be a regular part of reviewing portfolio performance and should be used as a gauge to help assess and manage the level of risk. The Society of Actuaries Blue Ribbon Panel on Public Pension Plan Funding recommends the use of stress testing to measure investment and contribution risks over a 30-year period.<sup>18</sup>

### **Adjust or remove the \$100,000 benefit cap as part of determining the necessary long-term contribution level.**

The benefit cap as currently valued makes the plan appear to be better funded than it is. By reflecting the current plan provisions with no future increases to the cap and no changes to the demographic assumptions, the funding period is not adequately representative of the system's funding needs.

To address these concerns, the system should consider implementing one of three options:

1. Remove the cap entirely from the plan provisions.
2. Amend the plan provisions to index the cap to increase with inflation.
3. Amend the cap to be a level percentage of compensation rather than a flat dollar amount.

### **Use an experience study and asset-liability study to adjust assumptions, estimate future changes, and determine necessary long-term contribution level.**

The system is already planning to perform an experience study in late 2022. This will be a valuable step since the results of this study can provide a starting point to reevaluate the actuarial assumptions and determine what adjustments are necessary. Determining the most reasonable actuarial assumptions is necessary to establish the contribution levels needed to improve funding. The PRB encourages the system to specifically consider adjustments to certain assumptions as part of this process, as follows.

#### *Consider decreasing payroll growth assumption.*

Because the city population, the number of fire stations, and the city's firefighter headcount have remained constant for years, the system should consider amending the payroll growth assumption to reflect current demographic trends. This change would result in a contribution rate that is more closely aligned with the plan's actual cost.

#### *Consider using a generational mortality improvement assumption.*

The system is underestimating the normal cost compared to most other Texas systems using generational mortality improvements by assuming only five years of mortality improvements even for a 25-year-old new hire, who will likely live for 60 or more years. The system should consider moving to a generational mortality improvement assumption.

#### *Adjust assumptions to reflect benefit cap.*

If the \$100,000 benefit cap continues to be modeled in the valuation as is with an open group projection, then demographic assumptions should reflect likely member behavior as the cap decreases in value each year. Such a change is in line with ASOP 35. Two potential changes can serve as a starting point to resolve this issue:

- Assume more pre-retirement terminations at each age, as some members may request a refund of contributions as they realize the accumulated contributions are worth more than the retirement benefit.

- Decrease the payroll growth assumption, as it is unlikely the city will be able to maintain the current firefighter headcount with pension provisions that replace only about 25 percent of a member's salary at retirement. The city could find it difficult to hire new firefighters, and even more difficult to retain the ones they do manage to hire.

Alternatively, the system could determine the amortization period using a closed group projection in which the normal cost is assumed to remain level in all years. This method would ensure the current normal cost of roughly 13 percent of payroll continues to be valued in the future rather than an ultimate rate of less than 8 percent. A closed group projection based on the current normal cost would resolve any need to model changing behaviors as the normal cost decreased in the future.

*Evaluate need to adjust the return assumption by periodically performing asset-liability studies.*

The system should consider conducting asset-liability studies, which model future asset and liability cash flows under various scenarios and determine if the asset allocation is sufficient to support the future benefit payment stream. These studies can be used occasionally to help the system evaluate its asset allocation and investment risks, which will help the system evaluate the appropriate investment return assumption. Specifically, the system is encouraged to perform a study focused on the demographic challenges the system is facing, which may include more conservative actuarial assumptions, lower capital market expectations, and an examination of the effects growing retiree liabilities will have on investment return assumptions and allocation.

**Case Study: Closed vs. Open Group Projection**

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The only other Texas public pension system with a dollar cap similar to Wichita Falls Fire uses a closed group projection, which eliminates the decreasing normal cost. In a closed group projection, the current normal cost is used to determine the amortization period. Had that system used an open group projection, the normal cost likely would have decreased in every future year, like Wichita Falls Fire.

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**Submit a new FSRP prior to September 1, 2025, to avoid the stricter revised FSRP requirements.**

Developing reasonable expectations of upcoming assumptions and plan provisions is imperative for the future actuarial soundness of the fund. However, changing these assumptions makes it likely Wichita Falls Fire will fall out of compliance with its legacy FSRP, so the system and sponsor would be required to prepare a new FSRP under the current law. This new FSRP could include all the necessary contribution increases or other plan changes to create a sustainable and equitable pension plan.

The FSRP requirement would not officially take effect until an actuarial valuation demonstrates that the system is no longer compliant with the legacy FSRP. Accordingly, the system and sponsor may find it advantageous to begin preparing an FSRP before triggering the requirement. This would allow them more time to evaluate the best options to improve funding and educate the membership in preparation for any necessary votes to adjust benefits or contributions as required by TLFRA statute.

Additionally, completing an FSRP before September 1, 2025, would provide an opportunity to qualify for the exemption that would allow the system and its sponsoring city to prepare another standard FSRP

rather than a revised FSRP with stricter requirements if the system's funding period exceeded 30 years during the 10 years after the new FSRP was completed.<sup>21</sup> If the FSRP was submitted after that date, they would need to use an actuarially determined contribution structure and be projected to reach full funding to qualify for the exemption.

The system and city also could take advantage of this option even without first triggering an FSRP by submitting a voluntary FSRP. And, if they triggered the FSRP requirement during the preparations, they could already have significant portions of the work completed.

Regardless of FSRP type completed, the system and sponsor must update the system's funding policy to reflect those changes. The goals of a funding policy are threefold: to establish clear and concrete funding objectives, to set boundaries on what is allowable for actuarial calculations, and to develop plans for both positive and negative experiences. The funding policy should strive to balance these goals to ensure member benefits are secure, contributions are predictable from year to year, and future taxpayers are not burdened with the costs of previous generations.<sup>22</sup>

### **Consider using a smoothed actuarial value of assets.**

Since the PRB's new FSRP rules allow the amortization period to be calculated using the greater of the market value of assets or the actuarial value of assets, the system should strongly consider adding a smoothed actuarial value of assets. This method could help the system avoid a revised FSRP with no disadvantage.

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<sup>21</sup> More information about the current FSRP statute and rules can be found on the PRB website: <https://www.prb.texas.gov/actuarial/funding-soundness-restoration-plan-fsrp/>.

<sup>22</sup> *Interim Study: Funding Policies for Fixed-Rate Pension Plans*, Texas Pension Review Board, January 2019, <https://www.prb.texas.gov/txpen/wp-content/uploads/2019/02/Funding-Policy-Paper.pdf>.

## **Appendix**

## Key Metrics Used to Select Wichita Falls Fire

<b>Metric</b>	Amortization period (43.3 years in 2020)
<b>What it measures</b>	Approximately how long it would take to fully fund the unfunded actuarial accrued liability (UAAL) based on the current funding policy.
<b>Why it is important</b>	Given the Fund’s current assumptions, an amortization period above 17 years indicates the contributions to the Fund in the coming year are less than the interest accumulated for that same period and therefore the total UAAL is expected to grow over the near term. In addition, for a plan that contributes on a fixed-rate basis such as Wichita Falls Fire, the higher the amortization period, the more sensitive it is to small changes in the UAAL. This remains true given the information in the 2022 valuation.
<b>Peer comparison</b>	Wichita Falls Fire currently ranks third highest amongst its peer TLFRA plans (TLFRA plans between \$8.8M and \$20.2M payroll with liabilities between \$67.1M and \$121.4M).

<b>Metric</b>	Funded ratio (56.8% in 2020)
<b>What it measures</b>	The percent of a system’s actuarially accrued liabilities covered by its actuarial value of assets.
<b>Why it is important</b>	The lower the funded ratio, the fewer assets a system has to pay its current and future benefit payments.
<b>Peer comparison</b>	Wichita Falls Fire’s funded ratio is the fourth lowest in its peer group.

<b>Metric</b>	UAAL as a percent of payroll (326.0%)
<b>What it measures</b>	The size of a system’s unfunded liability compared to the annual payroll of its active members.
<b>Why it is important</b>	Provides a way to compare systems of various sizes and expresses the outstanding “pension debt” relative to current personnel costs.
<b>Peer comparison</b>	The system's UAAL as a percent of payroll is the fifth highest in its peer group.

<b>Metric</b>	Assumed rate of return (7.75%)
<b>What it measures</b>	The estimated annual rate of return on the Fund’s assets.
<b>Why it is important</b>	If actual future returns are lower than the assumed rate of return, future contributions will need to increase significantly, especially for a poorly funded plan. Wichita Falls Fire’s assumed rate of return is 7.75%.
<b>Peer comparison</b>	Wichita Falls Fire’s assumed rate of return is third highest in the state.

<b>Metric</b>	Payroll growth rate (4.00%)
<b>What it measures</b>	The estimated annual growth in the total payroll of active members contributing into the fund.
<b>Why it is important</b>	Contributions are calculated as a percent of active members’ pay and are back-loaded based on the expected growth in total payroll. If payroll does not increase at this rate, actual contributions will not meet those expected in the Fund’s actuarial valuations. Given the system’s inactive and active liabilities are not fully funded; contributions below expected levels will have serious consequences on the Fund’s long-term solvency.
<b>Peer comparison</b>	The Fund’s payroll growth rate of 4.00% percent is the second highest in the state.

<b>Metric</b>	Actual contributions as a percent of actuarially determined contributions (78.69%)
<b>What it measures</b>	Whether the current employer contributions have met a theoretical minimum threshold. <sup>23</sup>
<b>Why it is important</b>	The employer’s portion of the contribution is less than 79% of the amount needed to fund the system on a rolling 30-year amortization period. The PRB’s 2014 Study of the Financial Health of Texas Public Retirement Systems found that plans that have consistently received adequate funding are in a better position to meet their long-term obligations.
<b>Peer comparison</b>	This is the third largest shortfall percentage in its peer group.

<b>Metric</b>	Non-investment cash flow as a percent of fiduciary net position (-5.68%)
<b>What it measures</b>	Non-investment cash flow shows how much the system is receiving through contributions in relation to its outflows: benefit payments, withdrawals and expenses.

<sup>23</sup> The theoretical minimum threshold, or actuarially determined contribution (ADC), is a target or recommended contribution “to the Fund as determined by the actuary using a contribution allocation procedure,” as defined in Actuarial Standards of Practice No 4. If contributions to the Fund are made as a fixed rate based on statutory or contractual requirements, the ADC for this purpose is the contribution needed to fund the benefits accrued in the current year and maintain an amortization period that does not exceed 30 years, as required to be reported under Texas Government Code §802.101(a).



<b>Why it is important</b>	Viewing this metric as a percent of total net assets (or fiduciary net position (FNP)), in conjunction with the funded ratio and recognition of the relative maturity of a plan, provides information about the stability of a plan's funding arrangement.
<b>Peer comparison</b>	Wichita Falls Fire's non-investment cash flow as a percent of FNP is the second lowest in its peer group. If this trend continues, the system could face the potential risk of needing to prematurely liquidate a portion of existing assets to pay current benefits and/or expenses.

<b>Metric</b>	Fund exhaustion date (2051)
<b>What it measures</b>	The date upon which there are projected to be no assets remaining to pay retiree monthly benefits.
<b>Why it is important</b>	Ensuring adequate assets are available to pay monthly benefits when due is the primary concern of any pension fund.
<b>Peer comparison</b>	Wichita Falls Fire is one of only two plans in its peer group with a projected fund exhaustion date.

## Plan Summary

The Wichita Falls Firemen’s Relief and Retirement Fund (Wichita Falls Fire) is established in the Texas Local Fire Fighter’s Retirement Act (TLFFRA). TLFFRA provides general guidelines for fund management, but leaves administration, plan design, contributions, and specific investments to the discretion of the board of trustees. Wichita Falls Fire, as with all TLFFRA systems, is entirely locally funded.

### Benefits

<b>Retirement Eligibility</b>	Hired Prior to 4/21/16 – Age 50 with 20 Years of Credited Service Hired After 4/20/16 – Age 55 with 20 Years of Credited Service
<b>Vesting</b>	20 Years of Service
<b>Benefit Multiplier</b>	Hired Prior to 4/21/16 – 2.55% Hired After 4/20/16 – 2.50%
<b>Average Salary</b>	Average Compensation over the 130 consecutive pay periods of service which produces the highest average, multiplied by 2.167
<b>Benefit Formula</b>	Benefit Multiplier x Average Salary x Credited Service Limited to \$100,000 not indexed with Inflation
<b>Retroactive DROP Eligibility</b>	Hired Prior to 4/21/16 – Age 55 with 25 Years of Credited Service Hired After 4/20/16 – Age 57 with 25 Years of Credited Service
<b>Retroactive DROP Period</b>	Maximum 24 Months

### Contributions

As of the January 1, 2020, actuarial valuation, active members of Wichita Falls Fire contribute 13 percent of pay while the City of Wichita Falls contributes 13 percent of pay.

### Membership

Total Active Members	Members/Beneficiaries in Pay	Terminated	Total Members	Active-to-Annuitant Ratio
159	147	5	311	1.08

### TLFFRA Board Structure

Active Members	3 - Members of the retirement system; elected by fund members. Three-year terms.
Sponsor Government	1 - Mayor or designated representative, or the political subdivision's Chief Operating Officer or designated representative. 1 - Chief Financial Officer of the political subdivision, or designated representative. Terms correspond to term of office.
Taxpayer, Not Affiliated With Fund/Sponsor Govt.	2 - Residents of the State of Texas, must not be officers/employees of the political subdivision; elected by other Board of Trustee members. Two-year terms.

*Contribution and Benefit Decision-Making*

TLFFRA authorizes members of the retirement systems to determine their contribution rates by voting. The statute requires cities to make contributions at the same rate paid by employees or 12 percent, whichever is smaller. TLFFRA also allows a city to contribute at a higher rate than employees do through a change in city ordinance.

TLFFRA allows the board of trustees for each system to modify the benefits (increases and reductions). However, a proposed addition or change must be approved by the actuary and a majority of participating plan members before taking effect. Benefit changes cannot deprive a member, retiree, or beneficiary of the right to receive vested accrued benefits.

*Asset Allocation*

Asset Allocation (as of 12/31/2020)					
Asset Class	Equities	Fixed Income	Alternatives	Real Estate	Other*
Current Allocation	58.72%	25.91%	5.87%	8.81%	0.69%
Target Allocation	50.00%	30.00%	10.00%	10.00%	0.00%

\*Other includes capital assets, receivables and cash

System	2020	Cash	Equity	Fixed Income	Real Estate	Alternatives	RE+AI
Odessa Firemen's Relief & Retirement Fund	\$47,736,104	0.87%	70.60%	17.39%	11.11%	0.00%	11.11%
Longview Firemen's Relief & Retirement Fund	\$49,440,856	3.84%	45.02%	9.97%	8.51%	29.12%	37.62%
Galveston Firefighter's Relief & Retirement Fund	\$53,548,434	1.90%	64.24%	19.61%	2.68%	11.48%	14.16%
Port Arthur Firemen's Relief & Retirement Fund	\$55,702,890	1.46%	65.32%	33.03%	0.00%	0.00%	0.00%
Killeen Firemen's Relief & Retirement Fund	\$50,912,600	5.89%	57.35%	28.19%	4.28%	4.42%	8.70%
<b>Wichita Falls Firemen's Relief &amp; Retirement Fund</b>	<b>\$57,828,760</b>	<b>0.00%</b>	<b>58.75%</b>	<b>26.51%</b>	<b>8.85%</b>	<b>5.94%</b>	<b>14.79%</b>
McAllen Firemen's Relief & Retirement Fund	\$57,956,228	0.43%	68.56%	5.10%	0.00%	25.88%	25.88%
Abilene Firemen's Relief & Retirement Fund	\$56,393,440	6.14%	73.27%	20.24%	0.00%	0.93%	0.93%
San Angelo Firemen's Relief & Retirement Fund	\$77,329,058	1.61%	67.21%	19.42%	0.22%	11.54%	11.76%
Tyler Firefighters' Relief & Retirement Fund	\$81,054,656	3.17%	73.15%	22.17%	1.29%	0.00%	1.29%
Denton Firemen's Relief & Retirement Fund	\$117,198,139	10.57%	60.88%	14.46%	11.22%	2.85%	14.06%

*Investment Returns*

Rates of Return (as of 12/31/2021)				
Time Period	1-year	3-year	10-year	Since 1995
Gross Return	15.22%	17.30%	9.84%	8.56%
Net Return	14.10%	16.34%	9.17%	8.02%

**Historical Trends**

It is important to analyze trends across several metrics to conduct an intensive review of risks associated with the long-term funding of a public retirement system. A system with an asset level lower than its

accrued liability has insufficient funds to cover benefits. A system can experience an increase in unfunded liability due to various factors, including insufficient investment returns, inadequate contributions, and inaccurate or overly aggressive assumptions. Hence, a single metric cannot effectively capture the different drivers contributing to the increase of a system’s unfunded pension obligation. This section analyzes historical trends in various metrics identified by the PRB and makes comparisons to understand the sources of growth in unfunded liability for Wichita Falls Fire.

Wichita Falls Fire’s funded status has been steadily declining since 2000. Inadequate contributions have been the main cause of this decline.

*Assets and Liabilities*

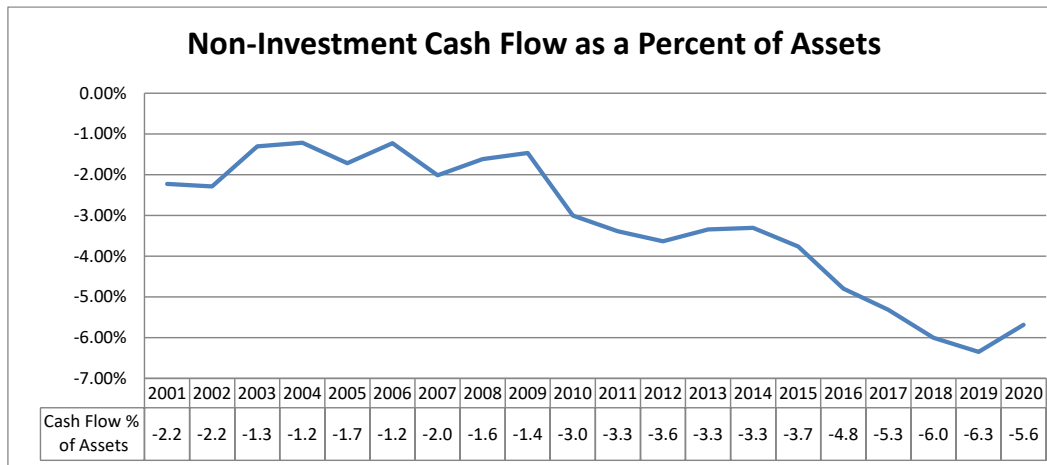
Funding Trends									
Funded Ratio, Amortization Period and Unfunded Liability as Percent of Payroll									
Valuation Year	2006	2008	2010	2012	2015	2016	2017	2018	2020
Funded Ratio	74.79%	72.54%	68.34%	63.00%	65.24%	64.38%	62.48%	57.70%	56.78%
Am Period (years)	34.6	24.8	38.9	63.2	105.9	43.7	49.4	Infinite	43.3
UAAL (% of payroll)	155.87%	167.15%	223.34%	274.94%	260.85%	252.24%	265.13%	316.54%	326.00%

The system was 86 percent funded in 2000 but fell to 57 percent in 2020.

*Cash Flow*

Wichita Falls Fire had the second lowest non-investment cash flow in its peer group. It has significantly decreased since 2015. Benefit disbursements and contribution refunds are worth more than double the value of contributions the fund receives.

A negative non-investment cash flow is not abnormal for mature defined benefit pension plans. However, a cash flow percentage this low is likely to be a drag on potential investment returns because a plan must either invest in a higher proportion of income-producing investments, which traditionally provide lower returns, or must liquidate existing assets to pay out current benefits or expenses. Moreover, a cash flow percentage this low also increases the likelihood of the system being required to prematurely liquidate its assets.



Peer Group Key Metric Comparison

Peer Group Plans	MVA	Funding Val Metrics						Fiscal Year End Metrics				
		Am Period Date	Am Period	Funded Ratio	UAAL as % of Payroll	Assumed Interest	Payroll Growth	FYE	Actual Cont. as % of ADC	DROP as % of FNP	Non-Investment Cash Flow as % of FNP	Fund Exhaustion Date
Odessa Firemen's Relief & Retirement Fund	\$47,736,104	1/1/2021	27.7	37.18%	461.24%	7.50%	3.50%	12/31/2020	89.14%	0.73%	-8.12%	N/A
Longview Firemen's Relief & Retirement Fund	\$49,440,856	12/31/2020	Infinity	40.02%	509.76%	7.50%	3.00%	12/31/2020	64.37%	N/A	-4.66%	2039
Galveston Firefighter's Relief & Retirement Fund	\$49,030,850	12/31/2019	57.6	64.90%	294.44%	7.50%	2.85%	12/31/2020	80.19%	N/A	-2.98%	N/A
Port Arthur Firemen's Relief & Retirement Fund	\$51,911,828	12/31/2019	27.3	74.99%	180.33%	7.50%	3.00%	12/31/2019	92.60%	N/A	-3.14%	N/A
Killeen Firemen's Relief & Retirement Fund	\$43,947,220	9/30/2018	39.8	69.35%	131.39%	7.50%	3.00%	9/30/2020	93.23%	N/A	0.36%	N/A
<b>Wichita Falls Firemen's Relief &amp; Retirement Fund</b>	<b>\$52,839,710</b>	<b>1/1/2020</b>	<b>43.3</b>	<b>56.78%</b>	<b>326.00%</b>	<b>7.75%</b>	<b>4.00%</b>	<b>12/31/2020</b>	<b>78.69%</b>	<b>N/A</b>	<b>-5.68%</b>	<b>2051</b>
McAllen Firemen's Relief & Retirement Fund	\$57,956,229	9/30/2020	27.7	69.50%	192.05%	7.50%	3.00%	9/30/2020	75.68%	N/A	-2.97%	N/A
Abilene Firemen's Relief & Retirement Fund	\$55,688,060	10/1/2019	31.4	49.07%	393.82%	7.50%	3.00%	9/30/2020	96.76%	0.00%	-4.39%	N/A
San Angelo Firemen's Relief & Retirement Fund	\$71,755,780	12/31/2019	37.6	61.97%	339.34%	7.80%	3.50%	12/31/2019	95.30%	N/A	-2.25%	N/A
Tyler Firefighters' Relief & Retirement Fund	\$74,572,570	12/31/2019	29.0	71.13%	240.14%	7.25%	3.00%	12/31/2020	94.83%	N/A	-4.95%	N/A
Denton Firemen's Relief & Retirement Fund	\$103,815,790	12/31/2019	18.3	80.79%	115.79%	6.75%	3.00%	12/31/2020	107.37%	N/A	0.76%	N/A

**Peer Group Sponsor Funding Comparison**

Peer Group Plans	General Fund Expenditures (GFE)	Expected Employer Contributions	Payroll (\$Millions)	Contributions/ GFE	Payroll/ GFE
Odessa Firemen's Relief & Retirement Fund	\$89,247,303	\$2,814,543	\$13.67	3.2%	15%
Longview Firemen's Relief & Retirement Fund	\$60,795,056	\$2,551,945	\$13.85	4.2%	23%
Galveston Firefighter's Relief & Retirement Fund	\$53,481,911	\$1,471,714	\$8.78	2.8%	16%
Port Arthur Firemen's Relief & Retirement Fund	\$62,108,297	\$1,337,739	\$9.30	2.2%	15%
Killeen Firemen's Relief & Retirement Fund	\$77,239,242	\$1,919,225	\$15.39	2.5%	20%
<b>Wichita Falls Firemen's Relief &amp; Retirement Fund</b>	<b>\$79,087,357</b>	<b>\$1,615,395</b>	<b>\$12.34</b>	<b>2.0%</b>	<b>16%</b>
McAllen Firemen's Relief & Retirement Fund	\$116,400,08	\$1,969,448	\$13.11	1.7%	11%
Abilene Firemen's Relief & Retirement Fund	\$96,343,197	\$3,414,114	\$15.31	3.5%	16%
San Angelo Firemen's Relief & Retirement Fund	\$82,050,627	\$2,577,835	\$12.64	3.1%	15%
Tyler Firefighters' Relief & Retirement Fund	\$75,556,716	\$2,708,618	\$12.26	3.6%	16%
Denton Firemen's Relief & Retirement Fund	\$121,963,673	\$4,158,368	\$20.15	3.4%	17%

Peer Group Size (\$Millions)			
Fund	Payroll	Actuarial Accrued Liability	Actuarial Value of Assets
Wichita Falls Fire	\$12.3	\$93.1	\$52.8
Average	\$13.3	\$98.0	\$58.9

Peer Group Expense Comparison

Peer Group Plans	10 yr. return (Net)	Active/ Annuitants	Average Benefit	NPL	Admin Expenses	Admin Exp as % of Assets	Investment Expenses	Inv Exp as % of Assets	Other Expenses	Total Expenses	Exp as % of Assets
Odessa Firemen's Relief & Retirement Fund	7.12%	1.09	\$51,139	\$69,999,260	\$196,147	0.41%	\$89,937	0.19%	0	\$286,084	0.60%
Longview Firemen's Relief & Retirement Fund	5.84%	1.11	\$43,394	\$162,570,306	\$73,839	0.15%	\$128,154	0.26%	0	\$201,993	0.41%
Galveston Firefighter's Relief & Retirement Fund	6.89%	1.25	\$40,485	\$18,974,664	\$112,582	0.21%	\$236,383	0.44%	0	\$348,965	0.65%
Port Arthur Firemen's Relief & Retirement Fund	7.84%	1.20	\$60,772	\$12,248,220	\$56,747	0.10%	\$71,589	0.13%	0	\$128,336	0.23%
Killeen Firemen's Relief & Retirement Fund	5.87%	2.95	\$38,843	\$19,243,744	\$107,111	0.21%	\$149,812	0.29%	0	\$256,923	0.50%
<b>Wichita Falls Firemen's Relief &amp; Retirement Fund</b>	<b>7.90%</b>	<b>1.08</b>	<b>\$36,789</b>	<b>\$80,142,060</b>	<b>\$115,915</b>	<b>0.20%</b>	<b>\$373,910</b>	<b>0.65%</b>	<b>0</b>	<b>\$489,825</b>	<b>0.85%</b>
McAllen Firemen's Relief & Retirement Fund	7.39%	1.51	\$38,613	\$25,544,808	\$38,950	0.07%	\$387,842	0.67%	0	\$426,792	0.74%
Abilene Firemen's Relief & Retirement Fund	5.83%	1.00	\$38,277	\$65,975,348	\$101,730	0.18%	\$196,365	0.35%	0	\$298,095	0.53%
San Angelo Firemen's Relief & Retirement Fund	7.50%	1.16	\$42,334	\$39,991,102	\$83,876	0.11%	\$304,226	0.39%	0	\$388,102	0.50%
Tyler Firefighters' Relief & Retirement Fund	7.65%	1.27	\$43,079	\$22,996,310	\$46,062	0.06%	\$628,582	0.78%	0	\$674,644	0.83%
Denton Firemen's Relief & Retirement Fund	7.96%	2.21	\$61,473	\$11,134,689	\$116,909	0.10%	\$182,906	0.16%	0	\$299,815	0.26%

Peer Group Value of Benefits Comparison

Peer Group Plans	Retirement Age	YCS	Multiplier as % of FAS	Normal Form of Payment	COLA	Social Security?	Normal Cost at Plan Discount Rate	Normalized Normal Cost at 7.50%
Odessa Firemen's Relief & Retirement Fund	55.0	25.0	0.72	Life Annuity	None	Yes	15.25%	15.25%
Longview Firemen's Relief & Retirement Fund	55.0	20.0	0.60	Life Annuity	None	No	17.01%	17.01%
Galveston Firefighter's Relief & Retirement Fund	50.0	20.0	0.60	Life Annuity with J/S 66%	None	No	20.66%	20.66%
Port Arthur Firemen's Relief & Retirement Fund	50.0	20.0	0.54	Life Annuity with J/S 66%	None	No	15.42%	15.42%
Killeen Firemen's Relief & Retirement Fund	50.0	25.0	0.70	Life Annuity with J/S 66%	None	Yes	17.43%	16.52%
<b>Wichita Falls Firemen's Relief &amp; Retirement Fund</b>	55.0	20.0	0.50	Life Annuity	None	<b>Yes</b>	<b>13.38%</b>	<b>14.12%</b>
McAllen Firemen's Relief & Retirement Fund	50.0	20.0	0.58	Life Annuity with J/S 66%	None	Yes	16.98%	16.98%
Abilene Firemen's Relief & Retirement Fund	53.0	20.0	0.55	Life Annuity	<b>None</b>	No	17.17%	17.17%
San Angelo Firemen's Relief & Retirement Fund	55.0	25.0	0.66	Life Annuity with J/S 72%	1.2% after age 65	No	22.81%	24.65%
Tyler Firefighters' Relief & Retirement Fund	50.0	25.0	0.72	Life Annuity with J/S 66%	None	No	21.85%	20.71%
Denton Firemen's Relief & Retirement Fund	50.0	20.0	0.52	Life Annuity with J/S 66%	None	Yes	22.33%	19.01%



## **Comments from Wichita Falls Firemen's Relief and Retirement Fund**

The PRB did not receive any comments on the initial draft from the Wichita Falls Firemen's Relief and Retirement Fund.

## **Comments from the City of Wichita Falls**



Jessica Williams, MPA, CPFO  
Chief Financial Officer  
City of Wichita Falls  
1300 7<sup>th</sup> Street,  
Wichita Falls, TX 76301  
940-761-7476

September 8, 2022

Pension Review Board  
P.O. Box 13498  
Austin, TX 78711  
512-463-3399

City of Wichita Falls Intensive Review

To Whom It May Concern,

In review of the draft Intensive Review, the City of Wichita Falls (City) thanks the Pension Review Board (PRB) for their review and recognizes the PRB's recommendations are for informational purposes only. The City provides the following comments.

The document presents data from both the 2020 Valuation and the 2022 Valuation creating confusion for the reader. At the onset of this project, the City indicated to the PRB that both a new valuation and an experience study were underway. The valuation, when complete, was presented to the PRB. It would be consistent to update the entirety of the report using the most recent valuation.

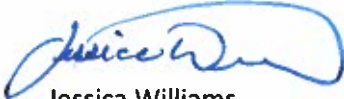
During the current budget process, the City of Wichita Falls increased the City contribution to the Wichita Falls Firefighters Pension Fund (fund) from 13.25% in fiscal year 2021-22 to 16.18% in fiscal year 2022-23. The City has worked closely with the Fund, the Fund's Actuary, and the Firefighters Association to make changes to improve the plan. In review of the 2022 valuation and considering recommendations from the PRB, it is the belief of the City and the Fund's Actuary that City contribution rates at 16.18% will decrease the total amortization period from 32.1 years to 24.5 years. The City therefore sees no need for further action at this time. The City and all affected parties will continue to work together to see that the funding of the plan increases and the amortization period decreases.

Neither the taxpayer, nor the City, may make changes to the Firefighters Pension Fund's self-determined benefits. Changes may only be made by a vote of the membership. This allows for an inequitable distribution of governance for all plan sponsors throughout the state. Plan sponsors are governed by representatives chosen by the people, through the election process, to represent the needs of their constituents. Any additional tax burden placed on taxpayers, due to the choices of these independent plans, must be both the responsibility of the member and, by agreement, the responsibility of the taxpayer.

The plan has consistently met or exceeded its benchmark returns, however, as noted in the Intensive Review, the fund lost considerable ground during the Great Recession. Following the Great Recession, the City of Wichita Falls entered into a historic drought, spanning over five years, which resulted in a decrease in population, stagnant growth and considerable financial challenges. As funds have been available, the City has made increases to the Fire Pension fund. The firefighters have voted to change their benefits and have reduced the richness of the plan for some incoming members.

The City again thanks the PRB for their review and will consider the suggestions contained therein.

Sincerely,



Jessica Williams  
Chief Financial Officer