

State of the City's Finances:

A Deep Dive into the Fiscal Issues Facing the City of Houston

The Greater Houston Partnership's City of Houston Budget Task Force

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GREATER HOUSTON
PARTNERSHIP

Setting the Stage

The Greater Houston Partnership is committed to working alongside City leaders, communities and other stakeholders on complex challenges facing our city and its future. We recognize that for Houston to grow and for Houstonians to thrive, the business community must play an active and constructive role.

One of Houston's thorniest challenges is its long-term financial health – and more specifically its persistent structural budget deficit. For years, the City has passed budgets reflecting year-over-year expenditures growing faster than revenues, closing the gap with one-off windfalls and deferred expenses.

This structural deficit is unsustainable. To help tackle it, the Partnership formed a City of Houston Budget Task Force earlier this year. The Task Force had three objectives: (1) to develop an empirical understanding of the City's financial structure and (2) help identify ways to enhance delivery of the services and benefits Houstonians should expect, while (3) achieving long-term financial stability by bringing its budget into structural balance.

The Partnership engaged Professor John Diamond of Rice University to help lead the research and compile this report. Professor Diamond's knowledge and expertise on state and local public finance has proved invaluable to the Task Force, and we are deeply grateful for his contribution.

SEVERAL KEY CONSIDERATIONS GUIDED THE TASK FORCE'S WORK

- 1 **Community-Focused Approach:** Houston is a City of diverse communities, and the Task Force engaged a broad range of stakeholders to ensure equity in the way it considered budget and revenue impacts.
- 2 **Collaboration with the City:** The Task Force and the Partnership acknowledge and respect that elected officials have the public mandate to set and execute policy. The role of the business community is to help identify solutions, inform debate and marshal resources.
- 3 **Public Safety:** The Task Force understands the supreme importance of public safety and does not advocate for any policy proposals that might impair or underfund public safety programs.
- 4 **Long-term Focus:** The Task Force recognizes that achieving a structurally balanced budget will likely take multiple budget cycles and require innovative thinking, and we stand ready to provide consistent support throughout each fiscal year.
- 5 **Recognition of Leadership from Previous Mayors:** The Task Force has been honored to work with exceptional city leaders, including Mayor Turner, Mayor Parker, and Mayor White. The 2017 pension reform spearheaded by Mayor Turner was a huge accomplishment. Likewise, Mayor Parker provided our City with sound leadership throughout one of the worst financial recessions in a generation while also setting the groundwork for Houston's extraordinary economic growth. Mayor White secured the approval of Houston voters for a \$90 million increase in the property tax revenue cap for public safety.
- 6 **Open to New Revenue Sources:** There will not be any single lever the City can pull to address this financial issue; instead, the City will need to consider all viable options, which will likely include politically difficult initiatives like new fees and enhanced revenue sources.
- 7 **Strategic Cost Savings:** To close its structural deficit, the City will need to significantly reduce costs and generate savings by promoting cost-effective operations and eliminating inefficiencies.
- 8 **Modernization of the City's Service-Delivery Model:** To deliver the highest level of services possible, the City should implement creative approaches to modernize its service delivery model based on the unique and ever-changing needs of Houstonians.
- 9 **Investment in Infrastructure:** The consistent underfunding of infrastructure development has long plagued our region. To enable the City's economic growth and to enhance Houstonians' quality of life, the City will need to invest in improved infrastructure.
- 10 **Keep Pension Reform on Track:** The City's previous unfunded pension liability significantly contributed to its current structural imbalance. The rising cost of the city's pension funds remain a financial strain on the budget. Still, the 2017 reform provided certainty to pensioners, predictability to the City's long-term liability, and the downside effect of the City's unfunded liability has been significantly mitigated. Therefore, the Task Force took great strides to be mindful of protecting a system that is working.

Executive Summary

Introduction

Houston, we have a problem: a chronic structural budget deficit.

A structurally balanced budget is one in which recurring revenues meet or exceed recurring expenditures, and the Government Finance Officers Association highlights it as a best practice for city governments.

But for a decade or more, Houston's recurring expenditures have exceeded its recurring revenues by between \$100 and \$200 million every year. The cash shortfalls have been filled by one-time revenue sources and deferred expenses – for example the sale of land and assets, the delay of major maintenance projects into future years, and most recently, the use of one-time federal stimulus dollars.

And while the FY 2024 budget estimates a healthy \$401 million reserve fund balance at year end – well above the minimum required – it assumes that \$160 million in federal ARPA dollars (a pandemic-related one-time revenue source) will be used to fund a portion of recurring expenditures. This will require the City in the following year to find \$160 million in revenue to offset the recurring expense or draw down on its fund balance.

These budgetary sleights of hand have resulted in a balanced budget on paper, but they are not sustainable, and they have contributed to an ever-widening operating deficit. Future one-time revenue windfalls cannot be counted on, and deferred projects only drive up future costs. The \$401 million in the reserve fund balance is an important stabilizer of short run budget needs but will quickly be exhausted without further action.

As of June 30, 2022, the total net position of the City's budget is a surplus of \$5.9 billion. The unrestricted portion of the net position is a deficit of \$6.3 billion.

All of this points to a growing structural budget imbalance that poses challenges to Houston's future growth and quality of life. It will require a collaborative effort by the City's government, businesses and communities to address this challenge and ensure the long-term financial resilience of the region.

Achieving a structurally balanced budget: Key considerations

The Greater Houston Partnership believes there is a compelling opportunity in the coming years for the City, business and community leaders to work together on strategies and policies that will enable Houston to realize a structurally balanced budget – enabling the City to grow and its people to thrive over the coming decades.

To address the challenge, leaders of the region will need to grapple with at least six key interrelated issues.

Macro-economic uncertainty

The only certainty about long term economic trends is uncertainty. For example, the City’s sales tax revenue collections for fiscal years 2022 and 2023 increased significantly as consumer spending and inflation spiked after massive government stimulus payments in 2020 and 2021. But most projections anticipate a reduction in sales tax collections in the coming years as the economy cools. Inflation, recession, global trade patterns, the price of oil, geopolitical conflict – all have unpredictable knock effects on the revenue the City collects and the cost of infrastructure and services, and such uncertainty needs to be anticipated in the structural budget balancing process.

Impending financial risks

The City faces a long list of high-cost liabilities, including deferred maintenance, contractual obligations with the City’s fire fighters, compliance costs with the City’s consent decree with the EPA related to wastewater system improvements, the rising costs of pensions and other post-employment benefit costs, and slowing population growth within the City of Houston. Some of the specifics underscore the scale of the challenge:

- Deferred Maintenance estimate related to roads: ~\$3 billion
- East Water Purification Plant Rehabilitation: \$1.14 billion
- Compliance projects with the EPA’s consent decree: ~\$2 billion
- Collective Bargaining for the Houston Firefighters: ~\$500 – 600 million

Tax Increment Reinvestment Zones

Tax increment reinvestment zones (TIRZs) are entities created within the City to spur new investment and growth within that area. Since 2010, TIRZs have grown rapidly in terms of revenue, revenue per capita, and the taxable property value contained in the zone. As of 2022, almost 25 percent of the City's tax base is contained in 26 TIRZs across Houston. While TIRZs have been successful in targeting local public investments, many have outlived their usefulness, concentrating City revenue in neighborhoods that no longer need it and complicating the ability to allocate City resources most efficiently.

City and State Revenue Caps

The City's property tax revenue cap also presents a challenge to achieving a structurally balanced budget. In 2004, Houston voters passed a cap on property tax revenue increases that requires voter approval to raise taxes above the combined annual rates of inflation and population growth or 4.5 percent, whichever is lower. But eliminating the City's revenue cap – even if politically feasible – would not be a financial panacea, thanks to the State of Texas statewide revenue cap that requires voter approval before local governments increase their property tax revenue by more than 3.5 percent.

Houston's Combined Utility System

The Houston Combined Utility System (CUS) is one of the largest water and wastewater systems in the United States, and it faces a number of challenging issues, including a consent decree with the EPA, substantial freshwater losses, and aging infrastructure at its water treatment plants. Recent extreme weather patterns have put additional pressure on an aging water system, with persistent low pressure in certain areas as infrastructure fails under tough conditions. Although the CUS's net funding position is relatively robust, nearly two decades of deferring maintenance in order to help balance the budget have taken a toll on the City's water infrastructure.

The Dedicated Drainage and Street Renewal Fund

The pay-as-you-go funding mechanism for street and drainage projects approved by voters in 2010 has failed to keep pace with depreciation and maintenance expenses. Language in the 2010 proposition has allowed the City to set aside less than the intended 11.8 cents per \$100 of taxable property value, resulting in a cumulative reduction of as much as \$420 million for street and drainage projects from 2012 to 2023. And the City has never spent more than half of the \$650 million per year that Public Works officials have estimated should be spent on such projects.

Conclusion

The City's structural budget can be brought into balance with innovative thinking and strong, sustained and collaborative leadership. The problem has grown over time and it will only be solved over time. But it must be solved. Our City's future depends on it.

Potential Policy Options

The following list of potential policy options is not meant to be exhaustive or exclusive. It simply illustrates the many options available to the City to close the structural budget gap and achieve a fiscal balance.

Cost Saving Measures

- Consider incentivizing early retirement for municipal employees
- Review of Other Post Employment Benefits
- Privatize certain services if significant cost reductions can be achieved
- Consolidate city departments / Audit of city of departments with potential sunset review
- Encourage coordination between city and county for shared services

New Revenue Sources

- Implement additional fees (e.g., solid waste and public safety)
- Levy user fees
- Prioritize TIRZ reform
- Make further adjustments to the City's revenue cap

Leadership

- Create a culture amongst city departments to embrace technology where cost savings can be realized
- Increase predictability and consistency in the permitting process
- Foster transparency in the contracting process

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I. INTRODUCTION

Over the past quarter century, the City of Houston has been an engine of growth and opportunity even while facing increasingly challenging financial situations. Beginning with the FY 2024 budget cycle, the city faces a series of difficult financial decisions that will set the trajectory of the city's financial health for years to come.

As of June 30, 2022, the total net position of the City's budget is a surplus of \$5.9 billion. The unrestricted portion of the net position is a deficit of \$6.3 billion. This highlights a significant financial challenge facing the city - adopting a structurally balanced and sustainable budget. This paper examines the financial challenges facing the city and provides information to inform policymakers and the general public on the opportunities policymakers have to set the city on a sustainable course, while also highlighting the risks and consequences of inaction.

Note that the City of Houston's budget situation has changed significantly over the last two decades. The overall picture of the city's pension obligations is a major driver of the city's overall budget situation. As of July 1, 2000, the three city pension systems were financially sound with funding ratios for Houston Firefighters' Relief and Retirement Fund (HFRRF) at 109%, Houston Police Officers' Pension System (HPOPS) at 102%, and Houston Municipal Employees Pension System (HMEPS) at 91%. In addition, throughout the 1990s the annual contributions were roughly 17% for HPOPS, 15% for HFRRF, and 10% for HMEPS. After an increase in benefits in the early 2000s, the annual contributions increased to roughly 30% for HPOPS and HFRRF and 50% for HMEPS. City leaders have passed several reforms in an effort to control this growing budget problem. The most recent reform, and to date the most successful reform, was in 2017.

Even though the 2017 pension reform increased the stability of the city's pension payments and reduced the estimated net pension liability, the city's pension funds remain a financial burden and pose a significant risk to the future financial health of the city. The annual costs of the pensions and other post-employment benefits (OPEBs) are nearly 40% of payroll. Over the last two decades, pension obligations have resulted in less investment in infrastructure and led to the city's propensity to sell assets to fill the gap in recurring revenues and recurring costs. The cost of funding pensions and OPEBs remains a significant strain that must be considered in tandem with the city's other outstanding financial liabilities, including fulfilling contractual obligations with Houston firefighters, complying with its consent decree with the U.S. Environmental Protection Agency, and addressing deferred maintenance.

In addition, the COVID pandemic brought a surge of federal aid equal to roughly \$1.5 billion that has been used to close the budget gap in the last few years. This one-time source of revenue has been used to fund recurring expenditures that will require new sources of revenues or reductions in other expenditures in the future to balance the budget.

All these issues contribute to the financial risks facing the city and are discussed in this paper. The next section discusses the magnitude of the projected structural budget imbalance. The third section discusses several potential risks that the city must navigate moving forward that will impact the budget and the quality of life in the Houston Metropolitan Statistical Area (MSA). The fourth section discusses other important issues that will impact the city moving forward, including tax increment reinvestment zones, the voter-imposed revenue limitation without voter approval, the Combined Utility System, and the Dedicated Drainage and Street Renewal Fund.

II. STRUCTURAL BUDGET BALANCE

The Government Finance Officers Association (GFOA, 2012) lists adopting and maintaining a structurally balanced budget as one of its best practices: “GFOA recommends that governments adopt rigorous policies, for all operating funds, aimed at achieving and maintaining a structurally balanced budget. The policy should include parameters for achieving and maintaining structural balance where recurring revenues are equal to recurring expenditures in the adopted budget.” GFOA notes that deviating from budget balance at times and thus using reserve funds to close a budget gap is acceptable, but that fiscal policies should push the budget back to balance so that recurring revenues and recurring expenditures are equal and projected to grow together. Alternatively, governments should avoid a fiscal structure built on using one-time revenue sources or reserve funds to routinely achieve a balanced budget. This has not always been the approach taken by the City. The City of Houston routinely balances its budget with one-time revenue sources and reserve funds. Contributing to this issue is the gap between recurring revenues and expenditures which is projected to grow over the coming years.

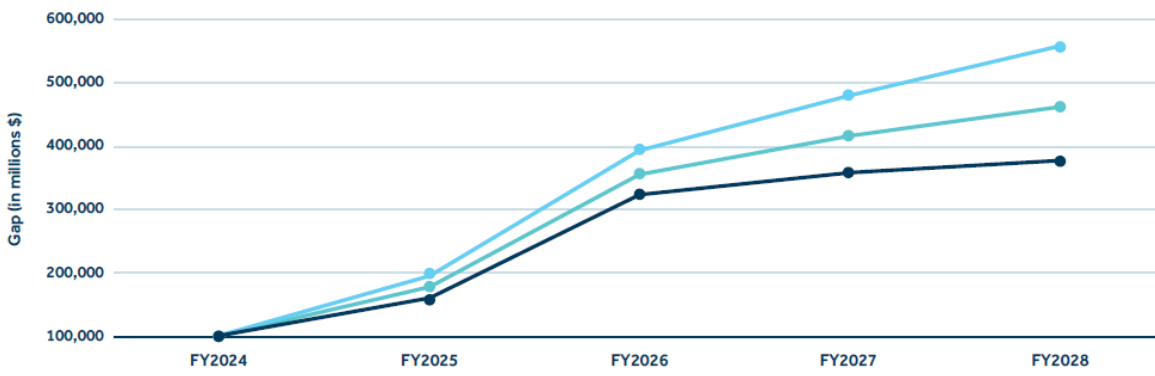
The city is required to maintain a minimum fund balance of 7.5% of total expenses less debt service. The fiscal year 2024 budget estimates a fund balance that is \$220 million above the minimum required balance (roughly \$181 million). This is a healthy fund balance that provides a cushion to stabilize to city expenditures in the case of an economic downturn.

However, two cautionary points are necessary. First, the healthy fund balance would not exist without the federal recovery and stimulus payments that the city has received. Second, the fiscal year 2024 budget assumes that \$160 million in ARPA (American Rescue Plan Act) funds will be used to cover a portion of recurring expenditures. Given an excess fund balance of \$220 million, above the minimum balance that must be maintained, the city could only cover a little over a year of recurring expenses that are currently assumed to be funded by ARPA funds in the most recent budget. Furthermore, irregularly high sales tax revenues create a potential revenue cliff in which revenues could fall significantly in the next two years. Thus, while a healthy fund balance is an important stabilizer of short run budget needs, it is not a remedy to the long run operating deficits facing the city.

Projected Budget Deficits Looking Forward

The adopted budget for fiscal year 2024 is balanced on an annual basis after including \$160 million in ARPA funds. This is not a new trend in that operating deficits have been fairly consistent for more than a decade, but the way they were filled was different. From 2017 to 2023, the operating budget deficit was between \$100 and \$200 million, with the shortfall filled by a series of one-time revenue sources including asset sales. The most recent operating deficits have been filled in part using ARPA funds and occurred in a period in which actual revenue collections have been greater than projected. Since 2020, the federal government has handed out over \$1 billion in emergency funds to the city. Note that the operating deficits in 2022 and 2023 were relatively large despite relatively solid revenue collections and ARPA funds. Not surprisingly, the latest forecasts from the city controller’s office and the mayor’s budget presentation indicate that Houston faces daunting fiscal challenges.

Figure 1
Controller’s Projected Pessimistic Budget Gap for FY2024-2028
 (General Fund Expenditures in Excess of Revenues)



	FY2024	FY2025	FY2026	FY2027	FY2028
● Controller - Pessimistic (4%)	100,471	160,402	322,261	358,407	377,611
● Controller - Pessimistic (5%)	100,471	177,935	356,181	416,819	462,652
● Controller - Pessimistic (6%)	100,471	195,467	393,174	482,028	559,070

Source: Office of the City Controller

Notes: Controller’s projections.

Revenue projections:

Sales tax is assumed to decrease by approximately 11% compared to FY2023.

Includes ARPA grant funds of \$303M split between FY2024 and FY2025.

Expenditure projections:

Expenditure amounts are assumed to increase by 4%, 5%, and 6% for FY2025 - FY2028, using FY2024 amounts as the base.

Debt service for FY2025 - FY2028 is based on the maturity schedule and is not adjusted like other expenditures (using the 4%, 5%, and 6% assumption). Only expenditures are adjusted using the 4%, 5%, and 6% assumption.

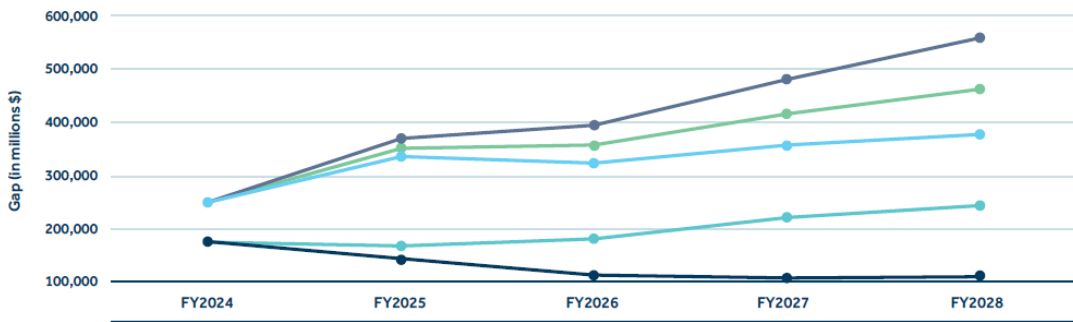
Assumptions for revenues remain consistent year over year.

Figure 1 shows the controller’s projections for three spending scenarios assuming sales tax revenues decrease by roughly 11% in fiscal year 2024. The spending scenarios assume that non-debt general fund expenditures increase by either 4%, 5%, or 6%. Debt service costs are determined by the maturity schedule

related to each debt agreement. ARPA funds are included in revenue in fiscal year 2024 and 2025. Otherwise, revenues grow based on projections for each source, which are consistent across the three scenarios. Starting with a \$100 million projected budget gap in fiscal year 2024, Figure 1 shows that it grows by \$60 to \$95 million in fiscal year 2025, by \$222 to \$293 million in fiscal year 2026, by \$258 to \$382 million in fiscal year 2027, and by \$277 to \$459 million in fiscal year 2028.

Note that each percentage point increase in expenditures widens the budget gap by roughly \$85 to \$100 million in fiscal year 2028. Reducing expenditure growth is imperative to close the city’s existing structural deficit. All options to achieve significant savings should be considered including jointly providing services with other nearby government entities, consolidating and downsizing city departments when overlapping roles and functions exist, and privatizing certain services if significant cost reductions can be achieved. PFM (2017) provided a long list of additional recommendations. City leaders should make it a priority to consider implementation of these and other reasonable cost saving recommendations.

Figure 2
Administration’s and the Controller’s Projected Structural Deficit FY2024-2028
 (General Fund Expenditures in Excess of Revenues)



	FY2024	FY2025	FY2026	FY2027	FY2028
● Administration - Optimistic	176,346	144,165	113,551	108,037	110,479
● Administration - Pessimistic	176,346	168,203	181,283	221,474	244,021
● Controller - Pessimistic (4%)	250,016	335,402	322,261	358,407	377,611
● Controller - Pessimistic (5%)	250,016	352,935	356,181	416,819	462,652
● Controller - Pessimistic (6%)	250,016	370,467	393,174	482,028	559,070

Sources: Office of the Mayor and Office of the City Controller

Notes:

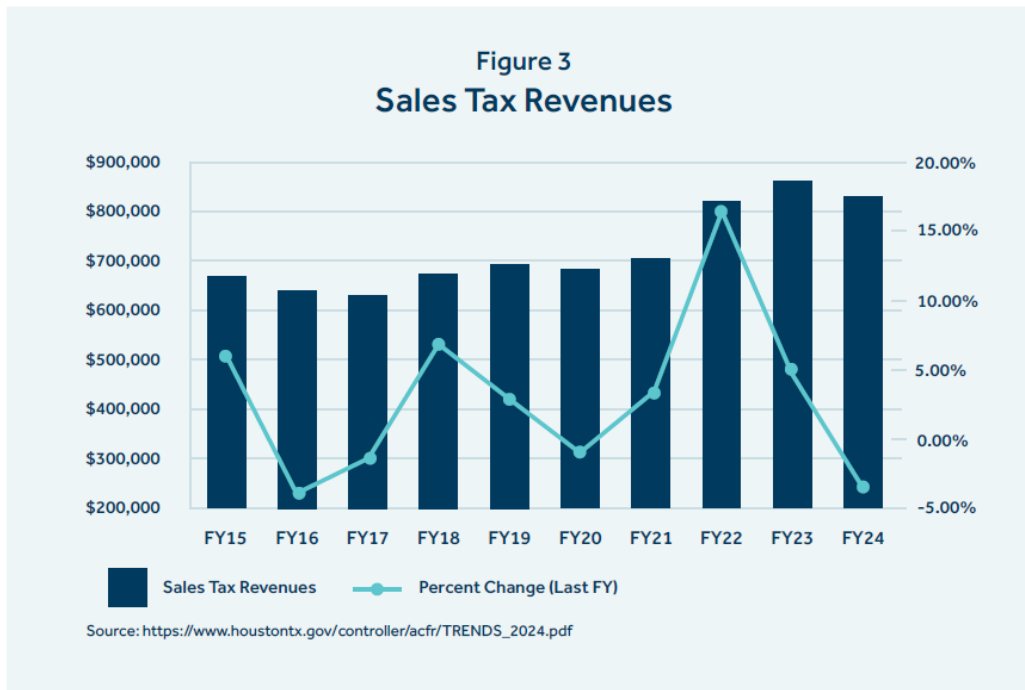
Controller’s projections - assuming expenditures increase by 4%, 5%, and 6% for FY2025 - FY2028, using FY2024 as the base. Debt service is based on the maturity schedule and is not adjusted like other expenditures. Only expenditures are adjusted. Assumptions for revenues remain consistent year over year. ARPA grant is excluded from revenue figures from FY2024 to FY2028.

Figure 2 shows the administration’s and the controller’s projections for five years. Note that the administration’s projections include an optimistic and pessimistic forecast and the controller’s projections include three scenarios that vary by the rate of expenditure growth. To estimate the rate of expenditure growth, consider the fiscal year 2024 budget. In the fiscal year 2024 approved budget, citywide expenditures

(which include expenditures in the general fund, special funds and enterprise funds) are expected to increase by 7%. By comparison, general fund expenditures are expected to increase by 5.2%. At least in the near term, this indicates that the controller’s estimate that assumes that annual expenditures increase by 5% is a reasonable assumption regarding future increases in expenditures.

Figure 2 indicates that there is a very high likelihood that the structural deficit will increase over time. Assuming no policy changes and ignoring other risk factors, the projections indicate it is likely that by fiscal year 2028, the structural budget deficit will be between \$200 and \$500 million. However, even under the most optimistic assumptions the projections show a \$100 million structural deficit in fiscal year 2028. This estimate is exceedingly optimistic and should not be the foundation of future policy. Instead, the city should plan for a more likely and moderate outcome, and then if this “best case” scenario occurs allocate unbudgeted funds to future municipal needs.

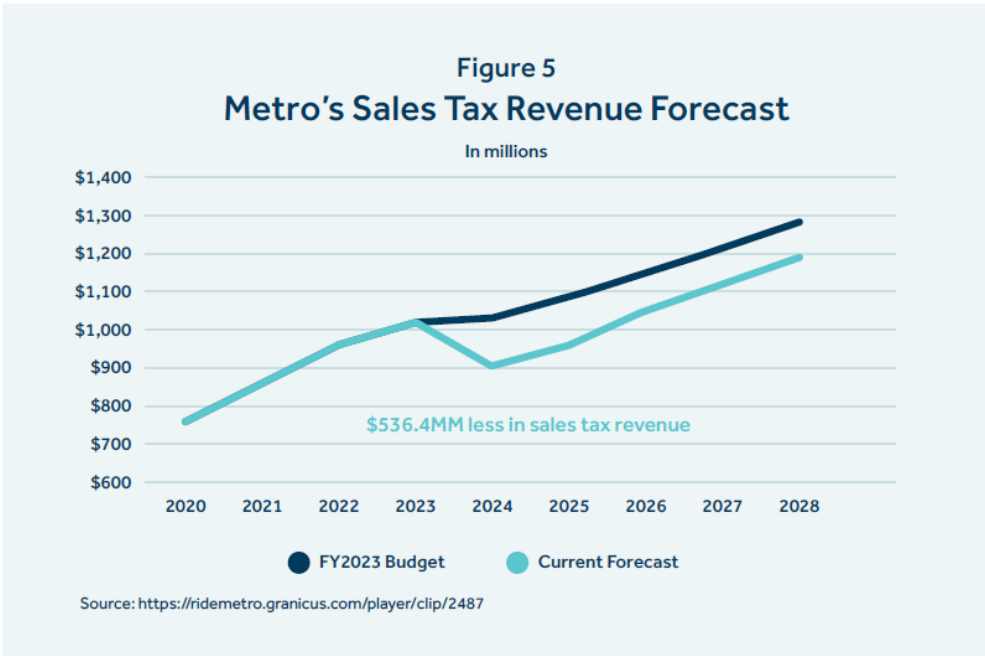
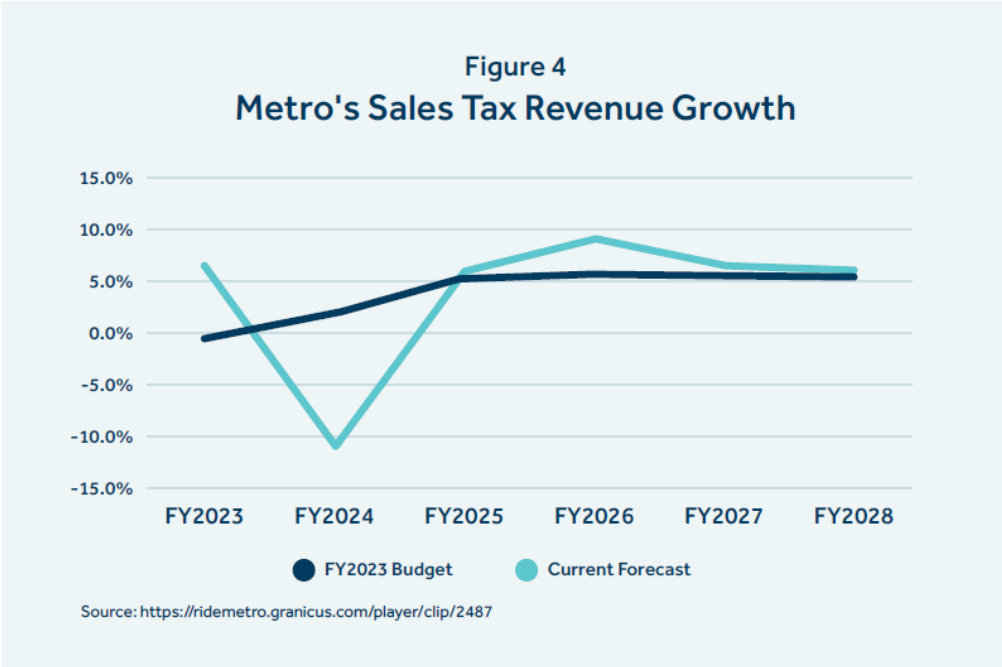
The biggest difference between the administration’s and controller’s projections is the assumption regarding the decline in sales tax revenues in fiscal year 2024. This is an important issue given recent events and the macroeconomic outlook over the next couple of years. In particular, Figure 3 shows that sales tax revenue for fiscal years 2022 and 2023 increased significantly as consumer spending and inflation spiked after massive government stimulus payments in 2020 and 2021.



It is likely that sales tax revenues will return to a more normal level in the coming years. This could occur as a large decrease in revenues in a single year or slow growth over several years. Forecasting the magnitude and timing of a decline in sales tax revenues is difficult. While no single estimate or forecast should be given too

much weight, it is wise to exercise caution in making predictions given the potential for substantial changes in revenues.

The controller's projections¹ shown above assume that sales tax revenues will decrease by roughly 11% in fiscal year 2024. By comparison, the administration's projections assume a 2.98% decline in sales tax revenues, followed by increases in sales tax revenues in the next four years.

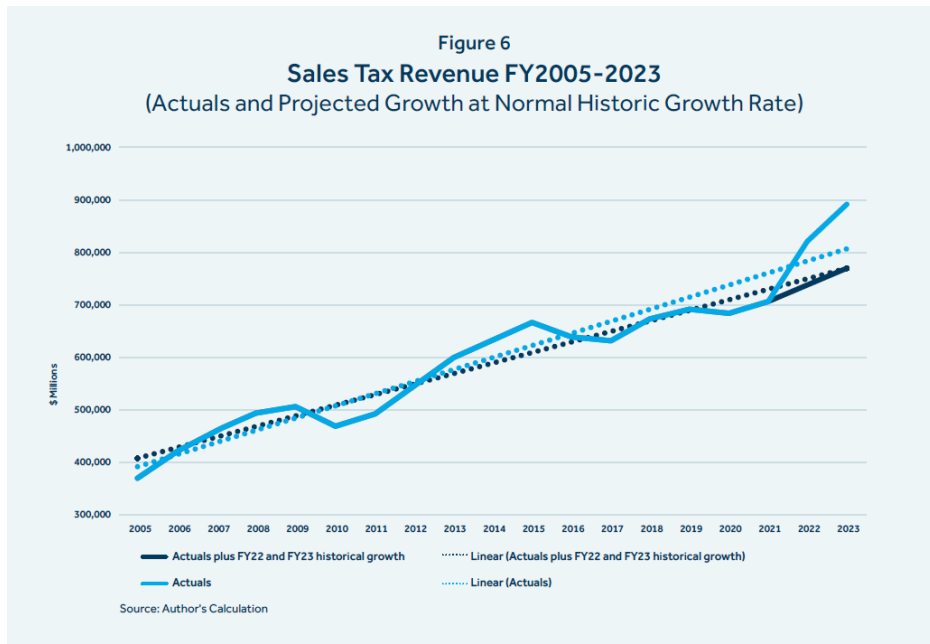


¹ The controller's office labels this as a pessimistic projection.

Consider the sales tax revenue projections from the latest budget workshop for Houston’s Metro, which was held on July 20, 2023. The meeting video confirms that Metro relies on forecasts from Dr. Robert Gilmer at University of Houston’s Institute for Regional Forecasting. Metro uses the “middle of the road” forecast adjusted down (in magnitude) by one percentage point, or an 11% decline in sales tax revenue in fiscal year 2024. Figure 4 shows that sales tax revenue growth is predicted to return to over 5% in fiscal years 2025 to 2028. Figure 5 shows the impact of an 11% decline in sales tax revenue in each year. The projection implies about a \$100 million decrease in fiscal year 2024 and a \$536 million decrease over the period from fiscal year 2024 to fiscal year 2028. Recall this is the “middle of the road” forecast, so there is a more optimistic and a more pessimistic case that could be considered.²

The assumption of a relatively small reduction in sales tax revenue in the budget for fiscal year 2024 creates a downside risk (a greater probability of sales tax revenue being less than projected rather than greater than projected). Given that the city has been running operating deficits for much of the last decade, this additional risk is inconsistent with the best practices of the GFOA.

The controller’s office labeled its projections as pessimistic, but such an outcome has a reasonably high probability of occurring. The assumption of an 11% decrease in sales tax revenue is the moderate projection of Houston’s Institute for Regional Forecasting and is the baseline assumption of Metro. The large decrease is consistent with a return to a more normal level of sales tax revenue after the impacts of massive fiscal stimulus and inflationary pressures reside.



² Since the writing and publication of this paper, Dr. Gilmer has issued new sales tax projections that show an improvement in sales tax revenues for the City compared to his March forecast. He no longer forecasts a decline in sales tax revenues in 2023 but does forecast a decline sometime in 2024. He states that compared to the March report, the current report starts from a higher initial value and declines less than previously estimated.

Figure 6 shows the actual growth in sales tax revenue (the solid blue line) from 2005 to 2023, and it shows what would have happened if sales taxes had continued to grow at the historical growth rate of 4.5% (measured from 2005 to 2022) in fiscal years 2022 and 2023 (the solid orange line). Note that in fiscal year 2021 actual revenues diverge from the previous norm (the solid orange line) as the federal government passed massive stimulus packages and inflation accelerated. Sales tax revenues are roughly \$120 billion larger in 2023 relative to the case in which revenues continued to grow at 4.5% in 2022 and 2023. Instead of growing at 4.5%, sales tax revenues grew by 16.4% in 2022 and 8.4% in 2023).

Figure 6 also shows that the last two years of rapid growth have shifted the linear trend upwards (the dotted blue line). It is unlikely that a large fraction of the change will be permanent. The assumption of an 11% decline in sales tax revenue in fiscal year 2024 is roughly equivalent to assuming about 75% of the shift in the trend line will be permanent. However, forecasts are uncertain and the timing of the decline in revenues may occur late in fiscal year 2024, in which case the decline in revenues would be spread over a couple of years. In addition, it is possible that a larger fraction of the increase sales tax revenues could be permanent (in particular, if they are driven by inflation and if wages grow by a similar amount to keep real wages roughly constant), in which case we would expect to see less of a decline in sales tax revenues. It is unlikely, although not impossible, that sales tax revenues decline by only 3% in fiscal year 2024 and then resume growing by 1.0 to 2.7% after fiscal year 2024, which is the assumption in the administration's projections.

As noted above forecasts are uncertain and economic conditions are constantly changing. Since the writing and publication of this paper, the short term forecasts and actual data for fiscal year 2024 sales tax revenues are more positive than expected in late spring and summer. This implies that fiscal year 2024 revenues are currently stronger than prior forecasts suggested. Given this, the City's forecast of a 3 percent decline in sales tax revenues in fiscal year 2024 is more likely than previously thought. However, as discussed in the paper the economic trends driving these strong sales tax revenues are not likely to continue indefinitely, but may persist for some time.

III. POTENTIAL RISKS TO STRUCTURAL BUDGET DEFICITS

There are several large risk factors with the potential to increase the city's structural deficits. These include negotiations with the city's fire department, a consent decree with the EPA, the negative impact of years of deferred maintenance, pension and OPEB costs, and slow population growth.

Failure to Reach a Collective Bargaining Agreement with Houston Firefighters

The most immediate risk is related to the litigation between the Houston firefighters and the city under Texas Local Government Code Chapter 174, the Fire and Police Employee Relations Act, that lays out how an impasse in a collective bargaining process will be resolved. Chapter 174 allows the court to resolve these disputes when no solution can be reached. Tex. Loc. Gov't Code § 174.002(a) states that

The policy of this state is that a political subdivision shall provide its fire fighters and police officers with compensation and other conditions of employment that are substantially the same as compensation and conditions of employment prevailing in comparable private sector employment.

Tex. Loc. Gov't Code § 174.002(d) states that

Because of the essential and emergency nature of the public service performed by fire fighters and police officers, a reasonable alternative to strikes is a system of arbitration conducted under adequate legislative standards. Another reasonable alternative, if the parties fail to agree to arbitrate, is judicial enforcement of the requirements of this chapter regarding compensation and conditions of employment applicable to fire fighters and police officers.

The statute allows substantial flexibility for the court to determine the proper remedy in this case. The next step is for the Firefighters and the city to present evidence before the court. The court will then determine how much the city owes in backpay dating back to 2018.

A 2023 report from ABC News estimates that every one percent increase in salary would cost \$3.25 million in back wages per year. The article states that "A union expert suggested Houston firefighters could be as much as 50% underpaid which would be \$162.5 million for one year alone." Thus, five years of back wages could potentially cost the city over \$1 billion including interest and legal fees.³ Moreover, the annual cost alone could be problematic as it will increase the structural deficit.

Another issue that could further exacerbate this additional cost associated with public safety personnel are the unknown impacts of SB 736, which requires binding arbitration by a three-member panel to set the starting contract in terms of salary, pension benefits, health insurance and working conditions. It is reasonable to assume that the binding arbitration process will be finished well before the court proceedings even begin. Either way, the city's financial position could be negatively impacted.

Consent Decree with U.S. Environmental Protection Agency

Houston entered into a consent decree, a formal and legally binding settlement, with the U.S. Environmental Protection Agency (EPA) and the State of Texas on April 1, 2021. Under the Clean Water Act, the federal government focuses on reducing sewer overflows that contaminate the fresh water supply and can cause property damage and health issues.

³ King (2023a) estimates that this may cost the city \$100 to \$150 million per year assuming salaries are 40% below private market wages in similar jobs. Given that the city owes backpay since 2018, King estimates that a worst-case scenario is a total cost of \$500-\$750 million, with interest and legal fees pushing it to over \$1 billion. He states this would be a devastating financial outcome for the city.

Houston has one of the largest wastewater systems in the United States, with more than 6,200 miles of wastewater lines, 381 lift stations, and 39 wastewater treatment plants. The decree stipulates that Houston must assess and repair its wastewater infrastructure over the next 15 years. A presentation by the Director of Water at Houston Public Works states that the estimated cost of the work required by the consent decree is \$6 billion, which is \$2 billion more than the normal level of spending on wastewater projects over a 15-year period.⁴ In addition, the presentation states that rates for water and wastewater already include the cost of project from 2021 to 2031 and that wastewater rates are projected to stay below 2% of median household income, the EPA's affordability threshold.

The consent decree poses the largest financial risk in the outyears. This would materialize if the city finds significantly greater issues than expected or if those issues are costlier to repair than projected, which would result in a shorter time span to spread and absorb additional costs. There is also the risk that budgets will dictate repairing the most accessible and least costly projects immediately and postponing the most expensive projects to the outyears. While there is no evidence of this currently, the last 25 years of city actions have indicated that there is a strong incentive to delay infrastructure improvement projects. There is also a risk of incurring additional fines and penalties if the work is not completed in a timely manner. Thus, it is important for the city to be transparent and forthcoming with its plans and findings with regards to complying with the consent decree. Houston Public Works has created a website to post monthly and annual reports on progress in meeting the terms of the consent decree.⁵

Deferred Maintenance

Deferred maintenance is the practice of delaying expenditures on infrastructure repair and upkeep to maintain current consumption levels and balance budget shortfalls. This results in a capital expenditure plan that is reactive and driven by failures in capital assets and equipment, as opposed to preventive maintenance that is more focused on maintaining a constant quality of capital assets and equipment. The total cost of deferred maintenance is much larger than expenditures that are postponed.

Piper (2021) states that "For every dollar saved by deferring maintenance, there comes a four dollar increase in future capital renewal costs." In addition, he argues that "[t]hose are the direct costs for that specific asset. There are additional indirect costs that may have an even larger impact. Over the life of that asset, those additional costs may total more than 15 times what would have been spent on the maintenance had it not been deferred." This estimate is mainly geared toward the maintenance of buildings and other structures.

⁴ The presentation is available at https://www.houstonpublicworks.org/sites/g/files/nwywnm456/files/doc/003-consent_decree_overview_tti_presentation.pdf

⁵ <https://www.houstonpublicworks.org/wastewater-cd>.

Chan (2023) points out that safety concerns of poorly maintained bridges and roads are an additional non-monetary cost of deferred maintenance. In addition, Chan estimates that the “average age of critical infrastructure includes our country’s dams at 56 years old, our water treatment system and pipes at 45 years old, and our bridges at 43 years old.” Lashley (2022) discusses the risks and consequences of deferred maintenance issues in regard to water and sewer infrastructure. She argues that there are several costs and risks of deferring maintenance such as the higher cost of replacement in the future, higher emergency repair costs compared to planned repairs in terms of direct and indirect costs, greater environmental damage risks, and the greater risk of health issues from consuming contaminated water. It is clear that deferred maintenance is a major problem, and its costs are much higher than the monetary cost of the deferred expenditures.

Houston is not alone in relying on deferred maintenance to balance current budgets. Zhao, Fonseca-Sarmiento, and Tan (2019) report that “state and local governments provide about 80% of U.S. public infrastructure investment.” Zhao, Fonseca-Sarmiento, and Tan estimate that total deferred maintenance at the state and local level was \$873 billion in 2018, or 4.2% of U.S. gross domestic product. Given the discussion above regarding the consent decree, it is obvious that Houston has been deferring maintenance expenditures to help close its structural deficits. For example, the estimated expenditures needed to get the wastewater system closer to a fully maintained state are estimated at \$2 billion. However, there are other examples as well.

A recent article in the Houston Chronicle reports that the city is losing billions of gallons of fresh water because of leaks caused by aging infrastructure that fails more frequently in extreme weather events. Cheng (2023) states that Houston lost 30 billion gallons of fresh water in 2022 and has not improved with over nine billion gallons lost in the first four months of 2023. Cheng estimates that this could be costing the city about \$150 million on an annual basis. She reports that this occurred while the city spent \$34.6 million in repairs for fiscal year 2023, which is more than three times as much as the ballpark estimate of \$10 million per year.

A standard benchmark for acceptable water loss is 10% to 15%. According to the National Drinking Water Clearinghouse, losses in excess of 20% are a sign that immediate action needs to be taken. Cheng (2023) reports that Houston “has lost over 20% of its total water supply five times since the start of 2022.” She adds that Houston has experienced more water loss relative to other large cities in the state of Texas going back as far as 2011. Finally, Cheng (2023) states that investments in new water infrastructure have fallen off dramatically since 2014, with 140 miles of water lines replaced in 2014 and only 10 miles replaced in 2022. She states that 32% of the water lines are outdated and need to be replaced. The article is like a case study in the how the cost of deferring maintenance expenditures in the short run leads to much larger costs in the long run.

Another water-related issue is the condition of the City of Houston’s East Water Purification Plant (EWPP), which is made up of three plants: Plants 1, 2 and 3. Aecon provided the city with an assessment and evaluation of the plants and options

regarding refurbishing or replacing the plants. Currently, plants 1 and 2 combined produce 180 million gallons per day (MGD) and plant 3 produces 180 MGD. The report stated that roughly 55% of the assets that make up Plants 1 and 2 needed to be replaced within five years. In addition, the report stated that for Plants 1 and 2 “85% (well over half) of the assets are performing moderately to very poorly, indicative of a moderate to very poor physical condition, indicative of a plant in need of rehabilitation.” Aecon recommended that Plants 1 and 2 should be decommissioned and Plant 3 should be expanded to produce 360 MGD. The cost of this project was estimated to be \$1.14 billion with a project completion date of 2035. During this time, the indirect costs of deferred maintenance will continue to accrue.

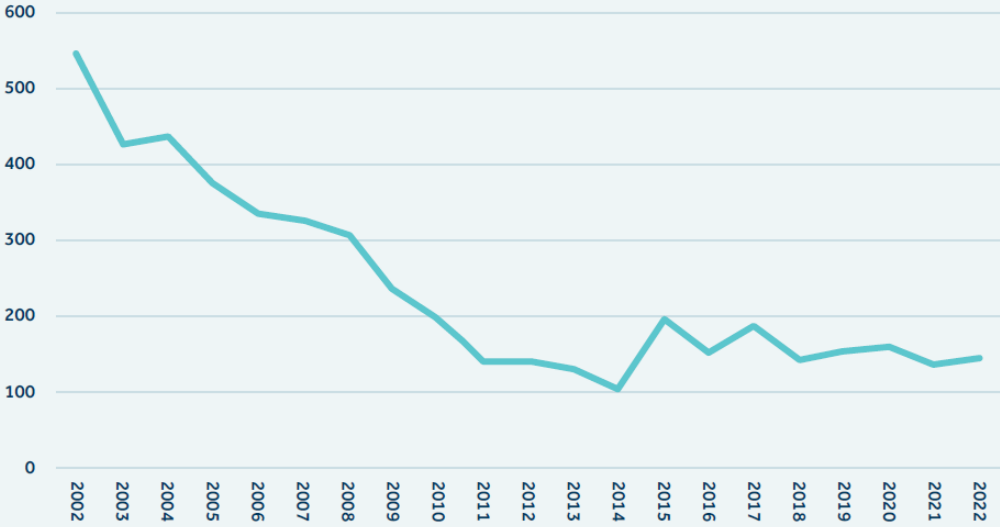
In another post, King (2023b) discusses why Houston’s streets are so bad. In particular, he starts by noting that Houston has about 16,000 lane miles of streets and roads. Assuming a useful life of about 40 years, which he correctly labels as a very optimistic assumption, he calculates that we should be repaving or repairing about 400 lane miles each year. As shown in Figure 7 and 8 below, King uses data from the Annual Comprehensive Financial Report (ACFR) on lanes miles resurfaced and tons of asphalt used by the city. The graphs are striking as the consumption of deferred maintenance expenditures and the city’s pension problems began at the same time. The answer to his question is simple, Houston’s roads are so bad because of a lack of investment in maintenance and repairs.

Subtracting the number of lane miles resurfaced each year from 400 (a likely underestimate of the number of lane miles the city should be resurfacing) and summing across the 2005 to 2022 period yields an estimate of 3,653 lane miles of deferred maintenance. An estimate of the cost to repave a mile of road in 2019 is \$1 million.⁶ This implies a total deferred maintenance estimate of \$3.7 billion. This is likely a substantial underestimate given the time when repairs need to occur to maintain a road well before the end of its useful life. Morris and Begley (2019) calculate that for a typical lifetime of 35 years and 16,500 lane miles the city would need to invest in 470 lane miles each year.

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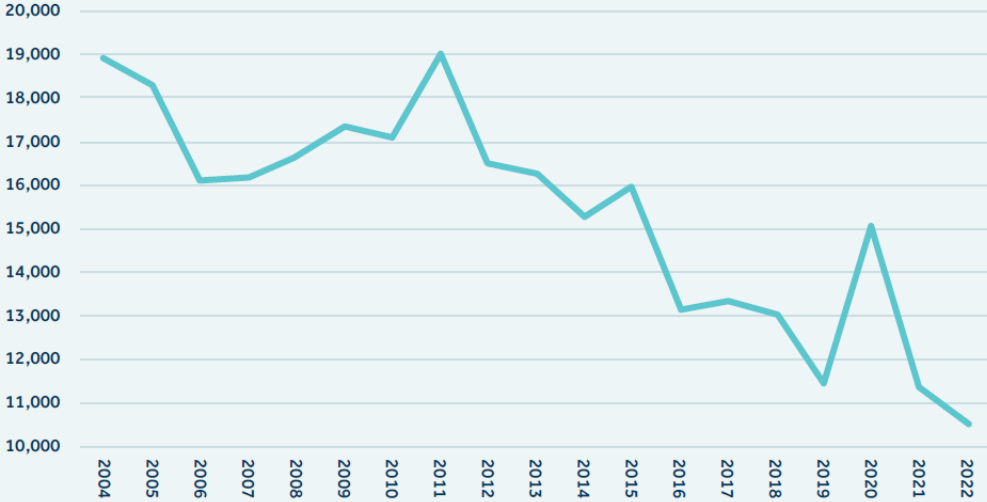
⁶ This estimate is from Roadbotics.com and is available at <https://www.roadbotics.com/2019/12/18/how-much-does-it-cost-to-pave-1-mile-of-road/>.

Figure 7
Lane Miles Resurfaced by the City
(2002-2022)



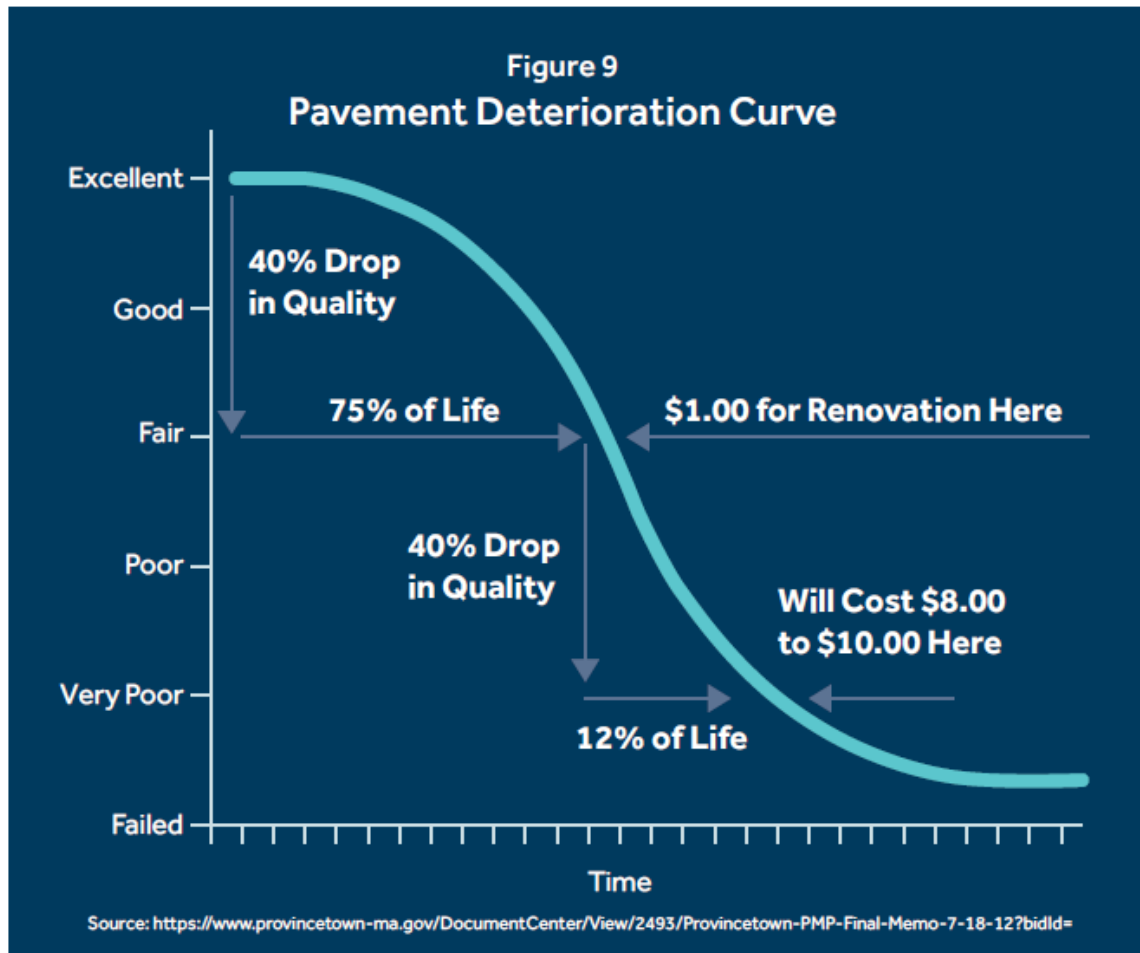
Source: <https://www.billkingblog.com/blog/why-are-houston-streets-so-bad>

Figure 8
Tons of Asphalt Used by the City
(2004-2022)



Source: <https://www.billkingblog.com/blog/why-are-houston-streets-so-bad>

However, as noted above, the cost of deferred maintenance is much larger than the cost of repairing assets on a timely basis. Figure 9 shows the pavement deterioration curve and the costs of repairing roads at different points along the curve. Repairing and repaving early on can reduce costs by a factor of 8 to 10 instead of doing it once the road has deteriorated substantially. However, Houston continues to postpone maintenance expenditures in an effort to balance the budget even after imposing new fees such as the drainage and street renewal fees passed in 2010. Morris and Begley (2019) state that “Despite residents paying a new fee, however, the city is not doing more street and drainage work.”



Pension and Other Post Employment Benefit Costs

To understand Houston’s pension issues, it is important to discuss how Houston’s three pension funds reached their current status over the past quarter-century and the 2017 pension reform. In addition, it is important to examine liabilities associated with OPEBs. While the 2017 pension reform stabilized the systems, pension and OPEB costs remain a significant strain on the city's budget that must be considered in tandem with the city's other floating liabilities.

Houston Municipal Employees Pension System

For HMEPS the actuarially determined contribution (ADC) was 6.2% of payroll in 1990, it increased to 9.3% of payroll from 1991 to 1993, and then rose steadily ending the decade at 9.8% of payroll in 1999. The ADC is the necessary contribution expressed as a percentage of payroll that must be made to keep or return the plan to a fully funded state given numerous actuarial assumptions. The plan was 93% funded in 1990, it fell to 79% funded in 1993, and then rebounded to 91% funded in 1999. The HMEPS actuarial valuation as of July 1, 1999 (Projection of Estimated Assets and Liabilities, p. 11)⁷, projected that the ADC would continue to increase to 14.1% by 2005. The actuarial report as of July 1, 2001 reported that the projection for the ADC had increased to 20.1% by 2006, at which time the pension plan would only be 76% funded. It is important to note that through fiscal year 2001 the City of Houston's actual contribution had been roughly equal to the ADC, and thus was not the cause of the increase in the ADC or the unfunded liability.

An increase in benefits, which went into effect May 11, 2001, caused the increase in the ADC. The HMEPS actuarial report as of July 1, 2001 (p. 9) shows the city contribution rate for fiscal year 2000 (9.5%)⁸ and breaks down the changes in the city contribution rate for fiscal year 2001. The changes included a 0.6% gain from a prior asset value increase, a loss of 0.6% from asset sources, a 0.1% gain from liability sources, a 0.7% gain from actuarial assumptions, and a 9.0% loss from the change in plan benefits. Thus, benefit changes were the cause of the ballooning ADC and unfunded liability in the HMEPS pension fund initially. Projections indicated the ADC would continue to increase significantly in the future to more than 50% of payroll (hereafter, the phrase "of payroll" is assumed to be understood in discussions of the magnitude of the ADC).

In 2004, the city and the pension fund entered the "Meet and Confer" process and agreed to the following provisions: the city agreed to contribute \$300 million to the pension fund in 2005, the pension fund agreed to reduce rates of future benefit accruals (although at the same time the maximum benefit was increased from 80 to 90%, allowing current employees to benefit from the overly generous provisions enacted in 2001), the employee contribution rate was increased from 4 to 5%, and the city and pension fund agreed that contributions would be set by a schedule of payments rather than by the ADC (with all contribution levels below the ADC). While the combination of these changes reduced the ADC significantly (from 53% in 2003 to 24.1% in 2005), the implied pension expense for municipal employees of 30.3% annually (the 24.1% contribution rate plus the 6.2% contribution for Social Security) was still unsustainable. It was also dependent on the actuarial assumptions matching actual outcomes.

⁷ This report is no longer available online but may be available on request. I have a copy of the report.

⁸ This report is no longer available online but may be available on request. I have a copy of the report.

This led to another round of Meet and Confer and to additional changes in the HMEPS pension plan that were effective for employees hired after January 1, 2008. This round of changes reduced the benefit structure for new employees, made new employees noncontributory (i.e., it reduced employee contributions for new employees from 5% to zero), and set a schedule of payments for the city (with contribution levels all below the ADC). The change to the benefit structure and the decrease in employee contributions roughly offset each other, as shown in the HMEPS actuarial valuation as of July 1, 2007 (Table 6, p. 14),⁹ which notes that the change in benefits for new hires reduced the ADC by only 1.5%. However, these changes did reduce the normal costs (i.e., the costs of funding accrued annual pension benefits within each year) to roughly 6% of payroll for new employees based on current actuarial assumptions. The troubling aspect of the process is that Meet and Confer has allowed the city to contribute less than the ADC in every year from 2004 to 2015. Thus, the funded ratio declined to 58.1% by 2014, and the ADC remained high (27.4% in 2014).

Houston Police Officers' Pension System

For HPOPS, the ADC was around 17% of payroll in the 1990s. After the city and the police officers' union negotiated compensation changes, the ADC increased to over 30% in the 2000s. This was the result of pension benefits being based on a final average salary number estimated by the highest two-week pay period, including overtime and one-time payments. This allowed individual "benefit spiking" that led to the increase in the ADC. In 2015, the ADC was estimated to be 38.2% of payroll. The Meet and Confer agreement in 2004 between the city and HPOPS repealed the benefit spiking provisions and reduced benefits for new hires by reducing the benefit structure, increasing employee contributions, implementing a minimum retirement age of 55, and eliminating the deferred retirement option. Another Meet and Confer agreement in 2011 between the city and HPOPS allowed for deferred payments of \$25.5 million and added a requirement that the city make additional payments if the funded ratio drops below 80% to increase the funding back to 80%. In the latest actuarial valuation as of July 1, 2015, the funded ratio has decreased below 80% funded and, thus, the city is required to pay an additional \$14.3 million to HPOPS. As with HMEPS, the city has failed to contribute the ADC from 2004 to 2015.

Houston Firefighters' Relief and Retirement Fund

For HFRRF, the ADC was roughly 15% in the 1990s. After an increase in benefits passed in 2001 (note that HFRRF can increase benefits without city approval), the ADC increased to over 30% in the 2000s. In 2015, the ADC was estimated to be 33.2% of payroll. The ADC was reduced in 2010 because HFRRF made several actuarial assumption changes, including increasing the retirement age and reducing the rate of salary growth. HFRRF has declined to negotiate with the city through the Meet and Confer process and, thus, the city is unable to make benefit changes. The HFRRF plan is fully funded as of June 30, 2022.

⁹ Available online at <http://www.hmeps.org/publications.html>.

2017 Pension Reform

In 2017, the City of Houston implemented major pension reform. Mayor Turner deserves enormous credit for creating and shepherding this reform through the state legislature. The reform created a framework for the city to manage the detrimental effects of its past financial mistakes. The reform was characterized by the following measures:

- Reduced the anticipated rate of return of assets to 7% and recognized all existing gains and losses in the system. This increased the city's estimated liability from \$5.6 to \$8.1 billion.
- Legacy liability of HMEPS was set apart and the city is required to make scheduled payments that increase at 2.75% per year until 2047. Legacy liability is defined as the HMEPS unfunded accrued liability ("UAAL") as of July 1, 2016, according to the initial Risk Sharing Valuation Study. This amount was set apart and will be repaid over a closed 30-year window from 2017 to 2047. In addition, the city must fund new liabilities as they are accrued by making an additional contribution of roughly 8.5% of payroll on top of the legacy liability which is roughly 20% of payroll.
- Enacted benefit reductions in all three pension systems, which reduced liability by \$2.5 billion.
- Required the city to fully fund the system on an annual and actuarial basis.
- Required the city to issue \$1 billion in pension obligation bonds to make up for past underfunding, with \$250 million to HMEPS and \$750 million to HPOPS.
- Implemented a 30-year closed amortization window that ends in 2047.
- Created a corridor mechanism that lays out the city's contribution amount given the performance of the pension systems and could potentially protect the city from contributing more than a predetermined maximum amount.

While the plan is a huge accomplishment and makes it easier to manage the ballooning pension costs facing the city, the financial consequences of past mistakes remain. It is critical that city leaders do not forget or minimize the costs that past financial mistakes have imposed on the city and its taxpayers.

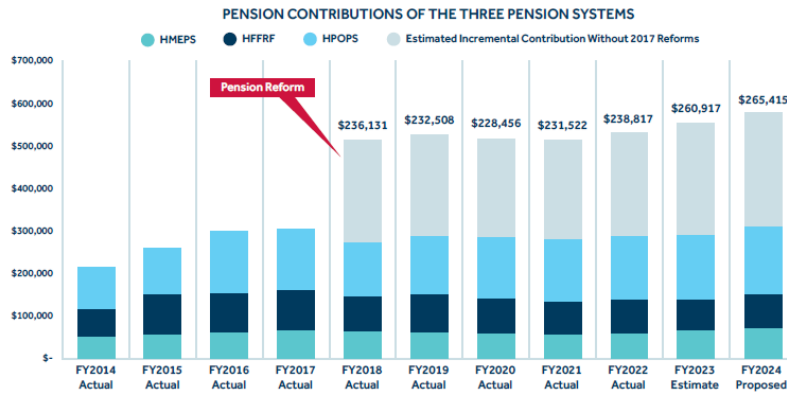
The plan has been referred to as "the pension solution" and Mayor Turner has, in his letter to Houstonians, stated that "the pension crisis in Houston is no more."¹⁰ In addition, the more recent analysis by the mayor's office could lead some to believe the city's pension obligations are less significant. For example, Figure 10 shows the general fund pension contributions with and without reform. Footnote 2 at the bottom of the slide states that "The full impact of pension reform on the City's General Fund contribution is \$1.7 billion," which is the sum of the estimated incremental contributions shown in the bar graph and calculated in the accompanying table.

¹⁰ <https://www.houstontx.gov/pensions/index.html#documents>

The full extent of the city’s financial commitment to fund the three city pensions is larger than the actuarially determined pension contributions. The city is obligated to pay the principal and interest payments on the city’s pension obligation bonds that represent the costs of past underfunding of the pensions as described in the 2017 pension reform. Figure 10 does not include the additional principal and interest costs related to the pension obligation bonds issued as part of the 2017 reform. In addition, Figure 10 only includes general fund pension contributions and does not include the total pension fund contributions the City must pay. For example, the fiscal year 2024 legacy liability payment according the January 1, 2017 Risk Sharing Valuation is \$146 million. The City states that Figure 10 only includes \$50.3 million of the legacy liability payment.¹¹

Figure 10
Mayor’s Office Budget Presentation Slide 31

General Fund Pension Contributions - FY 2014-2024 (\$ in Thousands)



	FY2014 ACTUAL	FY2015 ACTUAL	FY2016 ACTUAL	FY2017 ACTUAL	FY2018 ACTUAL	FY2019 ACTUAL	FY2020 ACTUAL	FY2021 ACTUAL	FY2022 ACTUAL	FY2023 ESTIMATE	FY2024 PROPOSED
HMEPS	\$51,354	\$57,039	\$60,447	\$66,968	\$62,643	\$61,682	\$59,814	\$57,586	\$59,745	\$67,079	\$71,067
HFRF	\$63,758	\$93,407	\$94,121	\$92,858	\$82,940	\$89,902	\$80,760	\$76,293	\$80,427	\$72,220	\$78,974
HPOPS	\$100,614	\$110,727	\$146,216	\$145,646	\$131,645	\$141,096	\$147,487	\$149,641	\$151,557	\$154,700	\$164,515
Pension Contributions	\$215,726	\$261,173	\$300,784	\$305,572	\$277,228	\$292,680	\$288,062	\$283,520	\$291,729	\$293,998	\$314,556
Change YOY (\$)	(29,857)	45,447	39,610	4,789	(28,344)	15,452	(4,619)	(4,541)	8,208	2,270	20,558
Change YOY (%)	-15.3%	21.1%	15.2%	1.6%	-9.3%	5.6%	-1.6%	-1.6%	2.9%	0.8%	7.0%
Estimated Incremental Contribution Without 2017 Reforms					\$236,131	\$232,508	\$228,456	\$231,522	\$238,817	\$260,917	\$265,415
Total Estimated Contribution Without 2017 Reform					\$515,196	\$526,665	\$517,869	\$516,703	\$530,546	\$554,916	\$579,971

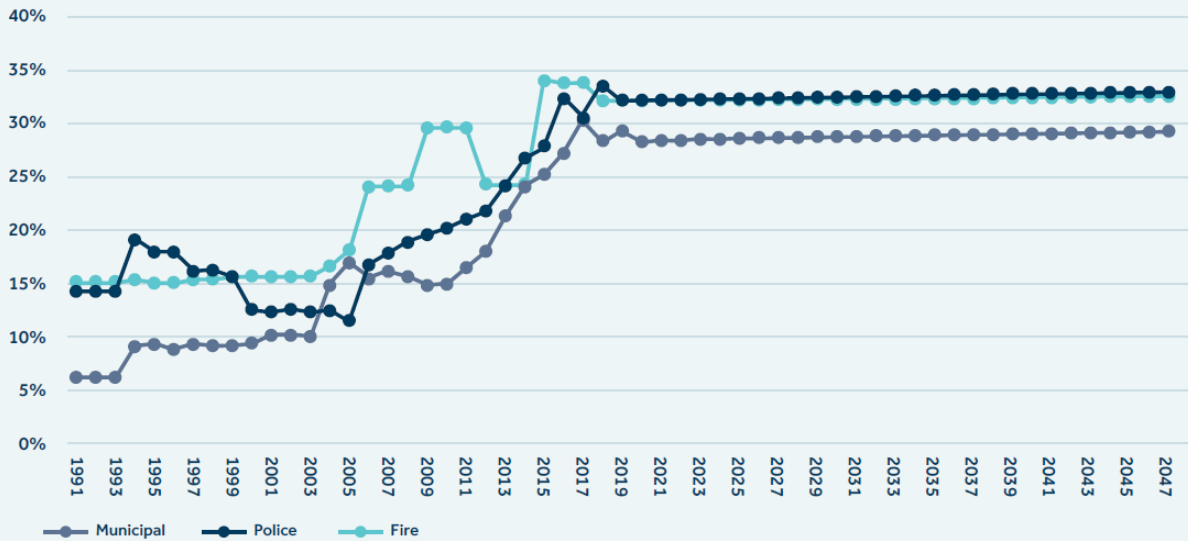
Notes:
 1. FY2018 Actual excludes \$910 million Pension Obligation Bonds for General Fund.
 2. The full impact of pension reform on City’s General Fund contribution is \$1.7 billion.

Source: https://www.houstontx.gov/finance/Five_Year_Plan.pdf.

ACFR 2022 (pages 119 and 120) reports total actuarially determined employer pension contributions were \$431 million. Figure 11 shows the historical contribution rates and corridor midpoints that are 32% of payroll for HFRF, 29% of payroll for HMEPS, and 32% of payroll for HPOPS. This highlights the high cost of employee pension benefits, even if the annual costs of principal and interest payments on pension obligation bonds are excluded.

¹¹ A prior version of this paper misconstrued the numbers in Figure 10 and revisions have been made to correct this mistake by the author. In addition, Table 1 was deleted as it was no longer necessary given the above revision.

Figure 11
Historical Contribution Rates and Corridor Midpoints



Source: <https://www.houstontx.gov/pensions/public/documents/PensionUpdate20190305.pdf> (page 2)

There are inherent risks associated with the pension funds as the performance of the systems are based on several assumptions. The actuarial assumptions that must be predicted to accurately project the cost of funding pension plans are often described as either demographic (referencing the population make-up of the pension plan) or economic in nature.

Demographic assumptions are often modeled using a rate of decrement. Decrements describe the probability that plan participants enter a new status under the plan, such as death, termination, disability, or retirement. The economic assumptions necessary to estimate the cost of providing a pension include the salary growth rate and the rate of return on assets, which is often used as the discount rate.

Each of these parameters is a composite function of several components. The salary growth rate is a composite function of changes based on merit, productivity, and inflation. The rate of return on assets is a composite function of the risk-free rate of return, a risk premium, and the rate of inflation.

Despite meaningful policy reforms, the pension systems continue to pose a substantial financial risk for the city. While the corridors are intended to reduce the risk of future rising costs, it would be difficult for the city to make contributions near the maximum contribution rates defined by the corridor mechanism. The maximum corridor is set five percentage points above the midpoint of the corridor. For example, contributions at the corridor maximum in 2022 would have been roughly \$70 million higher. Fortunately, the pension systems have some deferred gains that have not been fully realized to help offset a single year of market underperformance. However,

consistent weakness in FY 2024 and beyond is still a risk, which will hopefully be avoided as monetary authorities try to engineer a “soft-landing.”

While these outcomes are unlikely in the future, they cannot be ruled out and should not be ignored in formulating the city’s fiscal policy moving forward. But regardless of these risks, it is clear that the city has benefitted from the 2017 pension reform and is in a better position with regard to funding its pensions compared to any time in the last two decades. However, in terms of annual cash flows, total pension costs in excess of \$500 million and rising will remain a significant strain on the city’s finances for roughly the next three decades.

Other Post-Employment Benefits (OPEB)

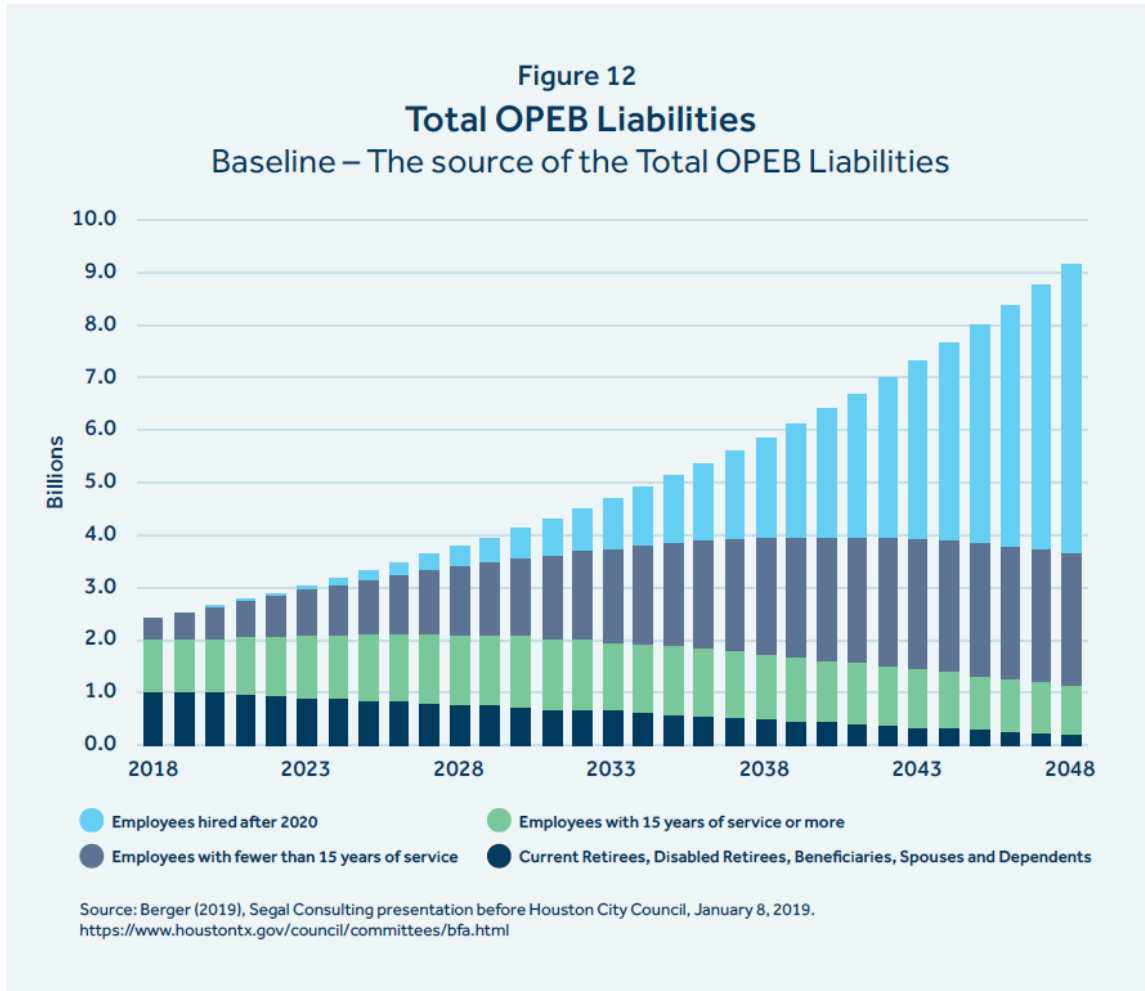
In January 2022, Houston reformed its health and disability benefits for new employees and for existing employees depending on their length of service, mainly by eliminating or reducing subsidies for certain benefits. The benefit cuts were an important reform, and Mayor Turner deserves credit for overseeing those efforts. As shown in Figure 12, Houston’s total OPEB liability was projected to be \$9.1 billion by 2048 prior to the reforms. After reform, the projected liability was \$4.5 billion, a projected reduction in liability of \$4.6 billion.

In addition, the city budgeted for and established an OPEB trust in fiscal year 2024. The initial contribution of \$10 million is assumed to escalate over time. However, projected structural operating deficits raise concern that continued contributions into the trust, and especially the much larger contributions that would be required to make a dent in the \$4.5 billion liability, are unlikely. Pierog (2023) quotes Mayor Turner in his address to the city council:

“In this budget, we are creating that trust and there is \$10 million put to starting that trust and it will require continuous payments and those payments will incrementally increase.... If we stay on course, then we would be dropping that unfunded liability for OPEB all the way down to \$1.1 billion. That would be huge.”

Note that if the city contributes \$10 million a year and earned returns on those contributions at 7%, then by 2040 you would have \$308 million, which would yield \$21.6 million in annual income. That is substantially less than the \$3.4 billion needed to get the total liability down from \$4.5 billion to \$1.1 billion. If the city contributes \$50 million a year, they would have roughly \$1.5 billion in assets in the trust, but total annual OPEB costs would equal the current benefit payments plus the \$50 million contribution until the trust was fully funded.

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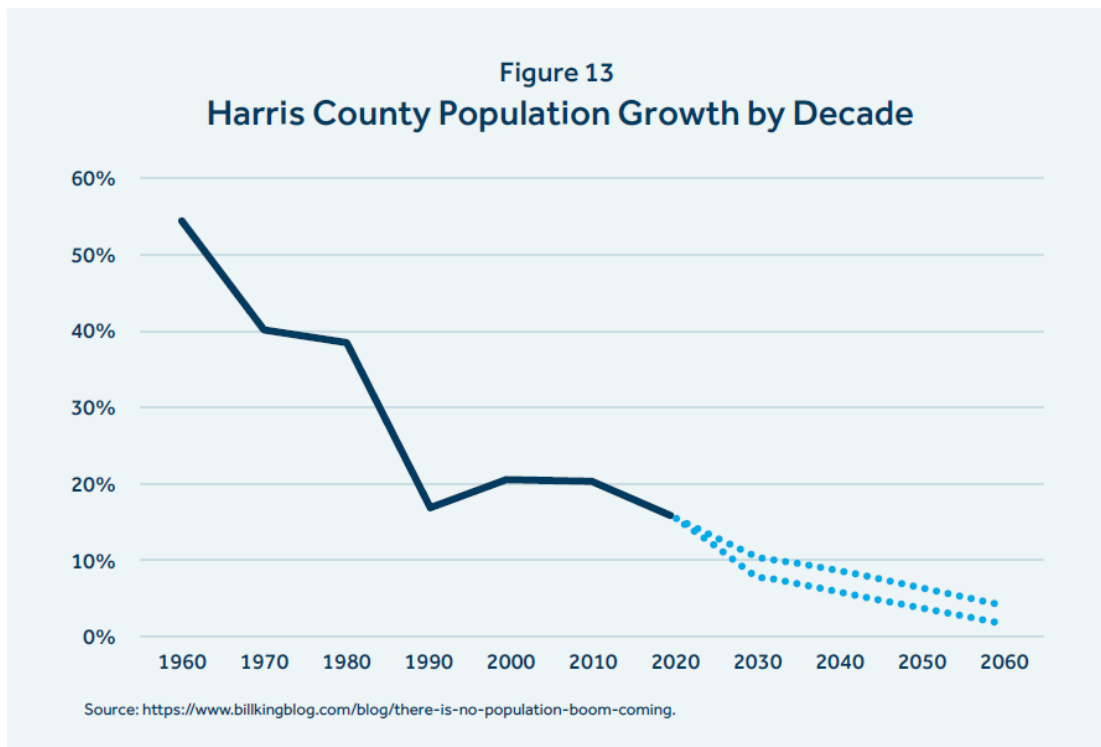
However, by creating the trust the city will be able to reduce the unfunded OPEB liability by billions of dollars by discounting liabilities (future benefit payments) using a 7% discount rate instead of a 3.8% discount rate. According to the actuarial analysis presented by Berger (2019), this assumption reduces the liabilities related to current benefits by about 33% but does not change benefit payments at all. This reduction in the present value of liabilities is an accounting gimmick.

Moving to a partially funded system has immediate and long-term impacts on cash flows, which are the important impacts that should be considered. For example, it raises immediate costs by the amount of funding that is deposited in the trust each year, and it also changes the future cash flows as benefit payments are funded from the trust. This requires annual contributions that are larger than annual benefit payments. To create a stable system that funds benefits perpetually, Berger (2019) states that with a 7% discount rate and amortization over 30 years, the actuarially determined contribution would need to be about twice the amount of the current payments in each period. While the benefit cuts will pay dividends to the city overtime, the trust will yield much smaller benefits than perhaps originally assumed and will tend to increase the current cash flows used to pay benefits and fund the trust.

Population Growth

Population growth is an important indicator of the city's financial health because property values and sales tax revenue are driven by increases in the population. In addition, the revenue cap uses population growth as a factor in determining the maximum growth rate of property tax revenues. While the Houston MSA has been growing, the share of the population growth in the city has been declining and this trend is projected to continue for a couple of decades. King (2023d) uses data from the Texas Demographic Center to show population trends by decade. Figure 13 shows the Harris County population growth by decade prior to 2020 and projected population trends out to 2060.

The Texas State Water Plan (TSWP) publishes similar data which shows the Houston MSA population is projected to grow by about 12% from 2020 to 2030 and by 10% from 2030 to 2040.¹² TSWP also projects the City of Houston will grow by 8% from 2020 to 2030 and by 7.3% from 2030 to 2040.¹³ The projections imply that the area around the city is expected to grow faster. PFM (2017) states that based on projections from the Houston Galveston Area Council that “the share of the region’s population residing within the city of Houston will drop from 35.5% in 2014 to 29.7% in 2040.” These patterns of population growth are troubling as economic growth and revenues are positively correlated with population growth. In addition, O’Connell and Howell (2016) find increasing concentrations of poverty within Harris County. Slow population growth and increased poverty increase the financial risks facing the city.



¹² <https://texasstatewaterplan.org/county/Harris>

¹³ https://www3.twdb.texas.gov/apps/reports/Projections/pop_City

The Cost of Financing with Debt

As interest rates have increased over the last two years, a significant problem is that financing new projects with debt will be more expensive relative to the extremely low financing costs following the 2008 financial crisis. This will be another risk to the city's financial position. It will raise the cost of financing new infrastructure projects and increase the size of needed budget cuts or revenue increases to balance recurring expenses and recurring revenues.

IV. OTHER IMPORTANT ISSUES

There are several other important issues that are worth discussing in terms of their impact on the city's financial position, including tax increment reinvestment zones, and the Combined Utility System,¹⁴ the Dedicated Drainage and Street Renewal Fund, and the voter-imposed revenue cap.

The Growth of the Tax Increment Reinvestment Zones

A tax increment reinvestment zone (TIRZ) is an entity created within the city that is intended to spur new investment and growth in that area. The initial goal was to create a policy that helps blighted areas increase development and growth. However, the law has since been interpreted as a tool to help any area with "underinvestment" relative to its potential.

Upon creation, the value of the property tax base at that time is allocated as taxable property that will yield revenues to the city. As the property values in the area increase, the incremental value above the initial value at the time the TIRZ was created will be controlled by the TIRZ leaders and generally spent within the TIRZ. For example, assume a TIRZ is created in a location with \$100 in taxable property and over the next 10 years the property increases in value to \$200. In year 10, the city and the TIRZ are each allocated revenue based on \$100 in taxable value. It would be reasonable to think that after spurring development in an area a TIRZ agreement would end, and the entire tax base would return to city control. In Houston, however, this has turned out not to be the case. Morris and Tedesco (2022) report that only one TIRZ has been disbanded.

Morris and Tedesco (2022) argue that TIRZs are "trapping funds in stable or even thriving neighborhoods while needier areas compete for scraps in strained city budgets."

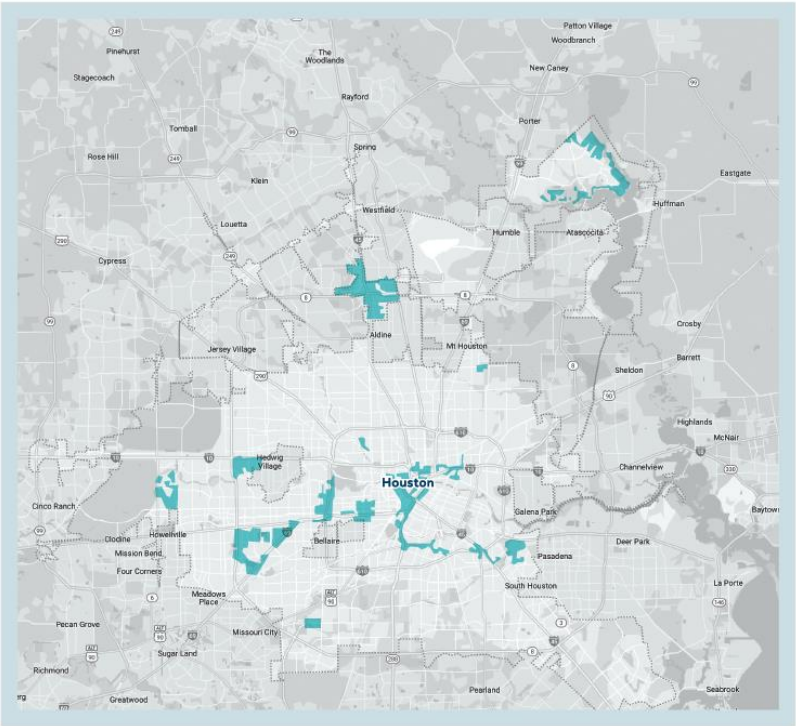
¹⁴ The three other enterprise funds are in a decent financial position and relatively less important in the long-term financial discussion. However, increasing efficiency of these three funds is important and should be a priority.

Since 2010, TIRZs have been growing rapidly in terms of revenue, revenue per capita, and the taxable property value contained in the zone. Figure 14 shows the areas contained in TIRZs in 2010 and Figure 15 shows the areas contained in TIRZs in 2022. There has been rapid growth in the share of land contained in TIRZs. As of 2022, almost 25% of the city's tax base is contained in 26 TIRZs across Houston. Over time as the increment grows larger and larger this will put more of a strain on the budget used to fund projects in other parts of the city.

City officials have argued that ending TIRZs is not possible because the city would not benefit from an increase in revenues due to the property tax cap. Morris and Tedesco (2022) argue that a 2006 proposition allowed the city to collect new revenues from a TIRZ that was terminated or reduced. However, this does not fully solve the problem. Whereas new revenue would be allowed in the year that a TIRZ was terminated, in the following years - as taxable property values grow - the revenue cap would restrain revenue growth. If the property is within a TIRZ, then increases in revenue overtime would not be constrained by the revenue cap. This is the likely explanation for the rapid growth in TIRZs and the reluctance to terminate these entities even after they have achieved their initial goals. The article indicates that Mayor Turner said that Houston "has been trying to minimize the impact of the revenue cap" by using TIRZs. The mayor is correct. King (2017) calculates that average property taxes in TIRZs increased by 13% and that in several the increase was over 25%.

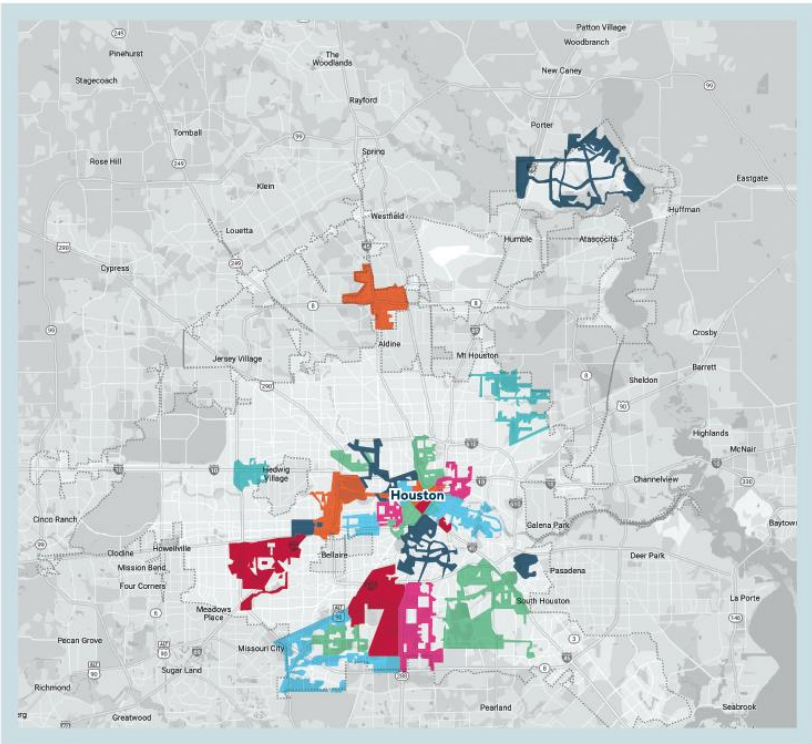
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Figure 14
Tax Increment Reinvestment Zones in 2010



Source: <https://www.houstonchronicle.com/projects/2022/how-houston-tirz-work/>.

Figure 15
Tax Increment Reinvestment Zones in 2022



Source: <https://www.houstonchronicle.com/news/investigations/unfair-burden/article/Houston-tax-incentives-benefit-Galleria-17447300.php>

A more thorough and complete accounting for the impact of TIRZs on the city is beyond the scope of this paper. However, this is an interesting and important question. For fiscal year 2024 it is estimated that TIRZ payments will be \$210 million or 13% of total property taxes collections. Furthermore, several TIRZ projects are of questionable value. This implies that TIRZs are likely trapping revenues in a way that leads to an inefficient allocation of investment across the city. The state revenue cap also carves out revenue increases in TIRZs and thus repealing the city revenue cap would not solve this problem. This is a critical issue that must be addressed in order to efficiently allocate investment across the city.

The Voter-Imposed Cap on Revenue Increases without Voter Approval

In 2004, voters passed a cap (or limit) on revenue increases that requires voter approval to raise taxes by more than approximately population growth plus inflation. Without voter approval, the cap limits the growth in property tax revenue to the lower of (1) the revenue in the previous year plus 4.5% or (2) fiscal year 2005 revenues adjusted for population growth and inflation in each year. The city finance office reports that the full impact of the revenue cap is \$1.83 billion since fiscal year 2015.¹⁵ This is a rather crude calculation and likely a significant overestimate of the true value because it assumes that the property tax rate is constant at the 2015 value. However, past experience indicates that as property values increase rapidly there is pressure from taxpayers to reduce the rate, which occurred frequently in the past. In addition, a new state revenue cap took effect in January of 2020 that effectively nullifies this issue moving forward. Nonetheless, the voter approved proposition has slowed the rapid rise in property taxes collected by the city, as it was intended to do.

There are several reasons why repealing the cap is unlikely to happen and not a reasonable solution to solve the city's structural deficits and under investment in maintenance of critical infrastructure. First, even if the city was successful in repealing the limit on the growth of property tax revenues (commonly referred to as the revenue cap), the increase in revenues going forward would be drastically less than the backwards looking \$1.83 billion estimate since 2015. The main reason for this is because the State of Texas imposed a limit on the growth in property taxes that took effect in January of 2020. So far, this limit has been a less severe limit than the voter approved limit on growth in city revenues. However, it's not clear this will always be the case. The state's House Ways and Means Committee studied the impact of its revenue cap relative to the Houston's revenue cap. That study found that from 2015 to 2019 that "Houston was able to increase property tax revenues by an additional \$255.4 million under its existing cap. Under SB 2, Houston would have been able to increase property tax revenues by an additional \$266.4 million."¹⁶

¹⁵ This document is available online at https://www.houstontx.gov/finance/Five_Year_Plan.pdf.

¹⁶ This analysis is available at <https://www.houstontx.gov/legislative-report-2019/legislative-battles/sb-2-property-tax-caps.html>.

Second, voters have demonstrated an aversion to property tax increases. Property owners consistently oppose large increases in property tax obligations due to increases in property valuations which takes place in a rather opaque process, that places an additional financial burden on the property owner. This preference exists at all levels of government in Texas, and was on display during the last legislative session that included passage of a record-breaking \$18 billion cut in property taxes. Given this, repealing the revenue cap is not a reasonable policy option.

The bottom line is that repealing the revenue cap is not a financial panacea and would raise much smaller amounts of new revenue than past (and current) estimates indicate.

Figure 16
Citywide Revenues (\$ in millions)
CITYWIDE REVENUE BY SUMMARY (\$ in Millions)

REVENUE CATEGORY	FY2022 ACTUAL	FY2023 CURRENT BUDGET	FY2023 ESTIMATE	FY2024 BUDGET	FY2024 VS FY2023 BUDGET	% OF TOTAL
Water & Sewer	1,329	1,457	1,557	1,774	21.76%	28.83%
General Property Taxes	1,245	1,272	1,287	1,377	8.25%	22.38%
Sales Taxes	821	807	892	866	7.31%	14.07%
Aviation	478	539	538	578	7.24%	9.39%
Other	398	296	351	369	24.66%	6.00%
Intergovernmental	303	326	308	293	-10.12%	4.76%
Charges for Services	259	271	271	282	4.06%	4.58%
Franchise Fees	150	148	148	150	1.35%	2.44%
Licenses and Permits	121	118	123	124	5.08%	2.01%
Other Tax	104	113	116	121	7.08%	1.97%
Interfund Services	98	102	103	111	8.82%	1.80%
Interest Income	23	34	48	53	55.88%	0.86%
Fines and Forfeits	31	31	31	31	0.00%	0.50%
Industrial Assessment	24	24	24	25	4.17%	0.41%
Total Revenue	5,384	5,538	5,797	6,154	11.12%	100.00%

Source: https://www.houstontx.gov/budget/24budadopt/1_CRS.pdf.

Third, it is unclear that the city faces a revenue growth problem based on the fiscal year 2024 budget. King (2023c) has pointed this out in a recent blog post. Figure 16 shows citywide revenue by source. Fiscal year 2024 budgeted revenues are projected to increase by 11.1% over fiscal year 2023 budgeted revenues, which came in 4.7% higher than the fiscal year 2023 budget. The most important lines in the citywide revenue summary are the first two lines for water and sewer revenues and general property taxes. Water and sewer revenues for fiscal year 2024 are projected to come in 21.8% above the budgeted amount for fiscal year 2023. Additionally, over the last two years, water and sewer revenues are projected to increase by 33.5% and

general property taxes are projected to increase 8.3% over fiscal year 2023 budgeted revenues.

Finally, the city population is declining as a share of the population of the Houston MSA. It would be unwise to substantially raise taxes (while total revenues are already increasing by more than population plus inflation growth) and potentially incentivize taxpayers to leave for surrounding areas. At the same time, it would be unwise to continue to underinvest in critical infrastructure and allow the city's assets to depreciate to an extent that the quality of life in Houston falls noticeably. It will be important for the next administration to endeavor to strike an appropriate balance between service delivery and long-term investments. Spending reductions are going to have to play a role in achieving a structurally balanced budget beyond simply reducing waste and inefficient spending, although both will also be required.

The Combined Utility System

The Houston Combined Utility System (CUS) is one of the largest water and wastewater systems in the United States. CUS services almost 8,000 miles of water lines and 7,000 miles of wastewater lines. As discussed above, CUS faces several challenging issues, including the consent decree with the EPA, substantial freshwater losses, and aging infrastructure at its water treatment plants. Additionally, there are issues with failing water meters that have led to major inaccuracies in water billings. Furthermore, recent extreme weather patterns have exacerbated the problems of a vulnerable and aging water system, with persistent low pressure in certain areas as infrastructure fails under tough conditions. Clearly, two decades of using deferred maintenance to help balance the budget have impacted the city's water infrastructure. The city must start to address these issues or face much higher costs, both in terms of indirect costs and repair costs, in the near future.

Based on current financial reports, CUS is currently in a strong financial position which provides a solid starting point to begin addressing these challenges. As noted in Figure 16, water and sewer revenues have increased dramatically since 2022. These revenue increases are being driven by two different ordinances passed by the city council. The first is a 2010 ordinance which requires that water and sewer rates increase on April 1 each year by an amount determined by the combined value of inflation and population growth in the previous year. The second was passed by city council in 2021 and increased water and sewer rates each year for five years, from 2022 to 2026. The mayor stated that these increases will in part pay for "the cost of making the first five years of investments agreed upon in the Consent Decree agreement with the Texas Commission on Environmental Quality (TCEQ) and the

EPA.”¹⁷ According to a presentation on the rate increases to the city council, Houston’s water and sewer rates will continue to be competitive with other major Texas cities.¹⁸

Based on the ACFR for fiscal year 2022, the CUS net position is \$2.5 billion as of June 30, 2022. In 2022, the change in net position was roughly \$900 million starting from a net position of \$1.6 billion as of June 30, 2021. By comparison, CUS’s net position as of June 30, 2018 was \$146 million. From 2018 to 2022, operating revenue increased from \$1.1 to \$1.3 billion. As shown in Figure 16, total sewer and water revenues are projected to be \$1.8 billion in fiscal year 2024. CUS is in a good position to start making transformational investments in the city’s old and failing water and sewer system.

The Dedicated Drainage and Street Renewal Fund

In 2010, voters approved a proposition that was intended to set aside 11.8 cents per \$100 of taxable property value for street and drainage projects. However, the language of the proposition included the phrase “or an equivalent amount,” which has been interpreted by the city to allow for a smaller amount to be set aside. Schuetz and Morris (2023) show that this interpretation of the proposition reduced funding by as much as \$420 million for drainage and street projects from 2012 to 2023. This is the difference between the sum of 18.5% of the city’s property tax revenues over this period (\$2.3 billion) and the \$1.8 billion that the city allocated to drainage and street projects. While this is important, even if the city began allocating the full 11.8 cents (\$2.7 billion from 2012 to 2023) it would not be enough.

The pay-as-you-go approach is not necessarily better than any other method of financing street and drainage projects if the amount of funding is inadequate to keep pace with depreciation and maintenance expenses. Morris and Begley (2019) state that “Public Works officials for the last decade have estimated Houston should spend at least \$650 million each year on street and drainage projects. Even adjusting for inflation, the city never has spent even close to half that amount.” The continued underfunding of drainage and street repairs is another major problem facing the city.

This leads to two conclusions. First, a purely pay-as-you-go approach is not the right solution, especially given the consistent operating deficits and underfunding of infrastructure. One reasonable approach is using debt to finance assets that last for 30 to 40 years. However, the maturity structure of the debt should account for the maintenance costs that are necessary to maintain the integrity of the capital goods around the 10 to 20-year range. This type of financing plan would allow for future taxpayers to pay a share of the cost for the roads they will use. Second, dedicated funding through an enterprise fund, like the CUS, reduces the amount of funds that

¹⁷ Mayor’s office press release and 2021 water and sewer rate increase is available at <https://www.houstontx.gov/mayor/press/2021/info-water-wastewater-rate-increase.html>.

¹⁸ The presentation to the city council is available at <https://www.houstontx.gov/council/committees/bfacommittee/20210427/Water-Waste-Water-Impact-Fees.pdf>.

can be siphoned off for other purposes, or at least makes it harder for government officials to allocate the money to other purposes. However, this can still be achieved by shifting labor costs from the general fund into the enterprise funds. The bottom line is that the city needs to increase spending on drainage and street repairs and provide transparent oversight on how funds are spent.

V. CONCLUSION

The City's structural budget deficit is a complex problem that poses challenges to Houston's future growth and quality of life. To address these challenges, leaders of the region will need to grapple with interrelated issues that affect our City's infrastructure, municipal employees, and delivery of services.

Without action, the operating deficit will only increase, with the gap between recurring revenues and expenditures growing ever wider. The City will need reduce unnecessary expenditures by implementing policies such as those outlined in the report created by PFM in 2017, while also exploring potential new revenues sources and creating more shared services within city government.

Regardless of what solutions are adopted, it is clear that City leaders need to approach the next several budget cycles with urgency and creativity. With a deferred maintenance bill of at least \$7 billion, not including the cost of addressing the issues related to freshwater delivery, the City must begin to make investments in its future. If not, the additional costs that come with deferred maintenance will continue to contribute to a structurally unbalanced budget. Available funds will likely have to come from reductions in expenditures and targeted fee increases. In order to gain the confidence of Houstonians, City leaders will need to guarantee that these funds are used to make necessary infrastructure investments.

The Greater Houston Partnership is prepared to support the City develop strategies and policies that will enable Houston to realize a structurally balanced budget - enabling the City to grow and its people to thrive over the coming decades.

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