



Texas County & District Retirement System

Investigation of Experience
January 1, 2017 to December 31, 2020

Presented at December 2021 Board Meeting

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November 19, 2021

Members of the Board
Texas County & District Retirement System
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Dear Members of the Board:

It is a pleasure to submit this report of our investigation of the experience of the Texas County & District Retirement System for January 1, 2017 through December 31, 2020. The results of this investigation are the basis for recommended changes in actuarial assumptions for the actuarial valuation to be performed as of December 31, 2021.

The purpose of this report is to communicate the results of our review of the actuarial methods and the economic and demographic assumptions to be used in the completion of the upcoming valuation. Several of our recommendations represent changes from the prior assumptions and are designed to better anticipate the emerging experience of TCDRS.

In preparing this report, we relied on information (some oral and some in writing) supplied by the TCDRS staff. This information includes, but is not limited to, statutory provisions, employee data, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes, although we have not audited the data at the source. Since the investigation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is found to be materially inaccurate or incomplete, our calculations may need to be revised.

We have provided financial information showing the theoretical estimated impact of the recommended assumptions on the December 31, 2020 actuarial valuation. We believe the recommended assumptions provide a reasonable estimate of anticipated experience affecting TCDRS. Nevertheless, the emerging costs will vary from those presented in this report to the extent that actual experience differs from that projected by the actuarial assumptions. The estimated cost impact was developed using models intended for valuations that use standard actuarial techniques.

Future actuarial measurements may differ significantly from the estimated measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

The recommended assumptions shown in this report were developed based on the guidance provided by the Actuarial Standards of Practice, in particular, No. 27 (Selection of Economic Assumptions for Measuring Pension

Obligations) and No. 35 (Selection of Demographic and Other Non-economic Assumptions for Measuring Pension Obligations).

This investigation of experience report recommends assumptions to be used in the valuation. These assumptions are used in the valuation to provide an estimate of the System's financial condition as of a single date. The valuation can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement.

Milliman's work is prepared solely for the internal business use of the TCDRS. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exceptions:

- a) TCDRS may provide a copy of Milliman's work, in its entirety, to the System's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit the System.
- b) TCDRS may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

No third-party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are retirement actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the plan sponsors. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the principles prescribed by the Actuarial Standards Board and the *Code of Professional Conduct and Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States*, published by the American Academy of Actuaries. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

We would like to acknowledge the help in the preparation of the data for this investigation given by the TCDRS staff.

We respectfully submit the following report, and we look forward to discussing it with you.

Sincerely,



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Principal and Consulting Actuary



Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary



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1. Executive Summary

Overview

Any actuarial valuation is based on certain underlying assumptions. Determining the adequacy of the required contribution rates is highly dependent on the assumptions that the actuary uses to project the future benefit payments and then to discount the value of future benefits to determine the present values. Thus, the assumptions are critical in assisting the employers in adequately pre-funding for the benefits.

To assess the reasonableness of the assumptions used in the valuation, they should be studied regularly. This process is called an investigation of experience (or experience study).

Summary of Results

We have recommended several changes to current assumptions. These recommended changes to the assumptions are expected to result in moderate decreases in the required contribution rates for most employers, although this may vary for individual employers.

Year 2020 Data Excluded

As part of our analysis, we looked at experience in 2020 separately. We found the experience of both active and retired members was materially different from other years, likely impacted by COVID-19. For example, mortality rates were approximately 20% higher in 2020 than the prior three years. At this point, we are not forecasting COVID-19 to have a long-term impact on TCDRS member experience in the future, so we have generally excluded experience for the year 2020 in our analysis and focused on observed experience in years 2017 through 2019. We have also considered experience from prior studies in making our recommendations.

Introduction

Section 2 discusses the following:

- How the investigation of experience study was performed.
- The presentation of results you will see in this report.
- Actuarial Standard of Practice No. 35 (setting demographic assumptions).

Actuarial Methods

Section 3 describes the actuarial methods used in the valuation. We recommend no changes to these methods at this time. Specifically, we recommend continuing to use the entry age normal actuarial cost allocation method, which creates a theoretically level normal cost rate as a percentage of pay over an employee's projected full career. We also recommend retaining the actuarial asset valuation method which smooths actuarial investment gains and losses over a five-year period with offsetting of current year gains and losses with those from prior years. Lastly, we recommend no change to the amortization method which systematically funds most changes in the Unfunded Actuarial Accrued Liability (UAAL) over 20 years on a layered basis.

Economic Assumptions

Section 4 discusses the economic assumptions: price inflation, the general wage increase assumption, the payroll growth assumption, and the investment return assumption. The economic assumptions were reviewed in detail in the first quarter of 2021. The Board of Trustees adopted new economic assumptions at the March 11, 2021 meeting, which included a 0.5% reduction in the investment return assumption and 0.25% reductions in the price

inflation, general wage growth and maximum payroll growth assumptions. These assumptions were used in the December 31, 2020 actuarial valuation and are therefore the current assumptions referred to in this report.

Long-term forecasts for price inflation are close to, but generally less than, the current assumption of 2.5%. We continue to believe 2.5% is a reasonable estimate of long-term average future price inflation and recommend retaining the assumption. Consistent with this recommendation, we recommend the related general wage growth assumption and the maximum payroll growth assumption remain at 3.0%. We have recommended adjustments to the payroll increase assumption for some individual employers based on observed past experience and the size of the employer. These recommendations are shown in Appendix A.

Based on TCDRS' target asset allocation policy, we believe that the current investment return assumption of 7.5% continues to be a reasonable assumption. Our analysis is primarily based on Cliffwater's capital market assumptions which yield an expected median return for the TCDRS portfolio of 7.5%, net of expenses. We performed additional comparisons with independent sources and concluded that 7.5% is a reasonable assumption based on this analysis and are recommending that the 7.5% investment return assumption is retained. It should be noted that about 80% of large public retirement systems have an assumption that is less than 7.5%; however, these other systems tend to have significantly different asset allocations than TCDRS.

Demographic Assumptions

Sections 5 through 12 discuss the demographic assumptions and are summarized on the following pages. The demographic assumptions are:

- Merit salary increases
- Death from active status
- Service retirement from active status
- Disability retirement from active status
- Termination from active status
- Probability of refund upon termination
- Post-retirement mortality
- Miscellaneous assumptions

Readers' Note

When measuring demographic experience, the ratio of actual decrements ("decrements" refers to members leaving active or retired status due to termination, retirement, death, or disability) to the expected decrements under the current assumptions is used and often referred to as the A/E (or Act/Exp) ratio.

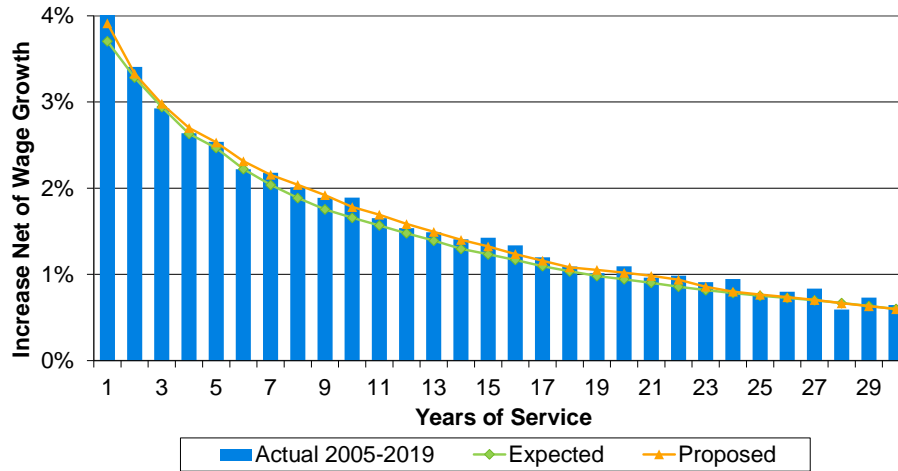
To better reflect the impact of an individual decrement on the plan's liability, a liability-weighted approach is used, which is approximated by monthly benefit amounts for the retired mortality analysis and annual salary amounts for the analysis of active assumptions. For example, if there were 100 retirees aged 80 with a total monthly benefit of \$100,000 and 5 retirees died who were receiving a total monthly of \$4,000, the headcount-weighted mortality rate would be 5% (5 divided by 100) and the liability-weighted mortality rate would be 4% (\$4,000 divided by \$100,000). The focus of our analysis in this study would be the 4%.

Note that "expected" decrements refers to the number of decrements (weighted by benefit or salary), such as service retirements, that would have occurred during the period if the experience had exactly matched the current assumptions, although we do not expect this to precisely occur. In general, an A/E ratio of close to 100% is desirable. If a ratio is materially less than 100%, it is likely the actuary will recommend reducing the assumption. Conversely, if a ratio is materially greater than 100%, it is likely the actuary will recommend increasing the assumption.

Merit Salary Increases

Section 5 discusses the individual salary increases due to the merit component of salaries. The results of our salary experience study showed actual merit increases that were somewhat higher than the currently assumed rates. Accordingly, we recommend an increase in the merit salary rates at most service levels, as shown in the following graph. It should be noted that, due to the year-to-year variance in measuring merit salary increases, we have used a longer experience observation period (2005-2019) to study this assumption.

Merit Salary Increases by Years of Service – All Members



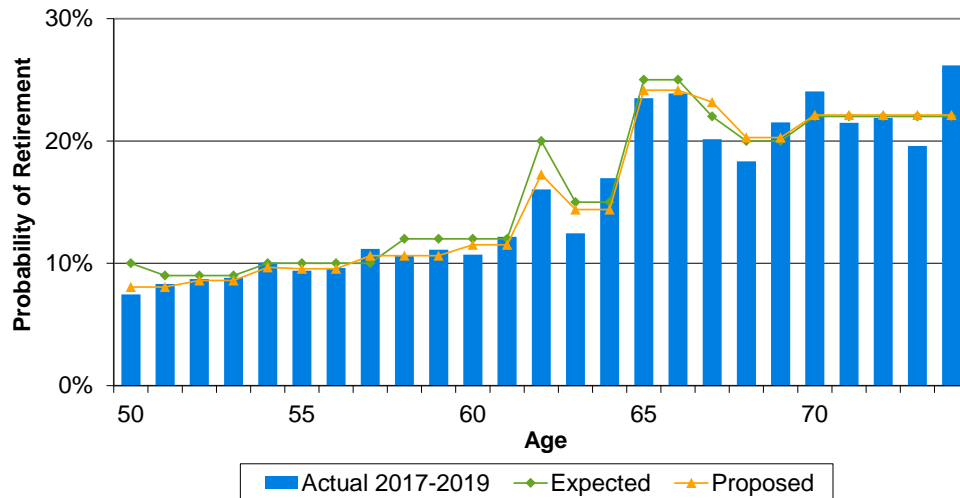
Death from Active Status

Section 6 discusses the probability an actively contributing member dies. The results showed slightly fewer active deaths than were expected based on the current assumptions. We recommend updating this assumption to use a new standard mortality table that is based solely on public plan experience, with the overall change being relatively minor.

Service Retirement

Section 7 discusses the probability an active member retires. The study’s results showed somewhat fewer actual retirements than were expected based on the current assumptions. The current assumptions vary based on age; and we continue to find age is the most significant factor affecting likelihood of service retirement. For this study, we also analyzed the impact of years of service on rates of retirement and found that it was a secondary, but material, factor. We recommend adjusting the rates to better fit experience, including adding in adjustments specific to years of service. The following graph shows the results along with our proposed new assumption.

Service Retirement Rates by Age – All Members



Disability Retirement

Section 8 discusses the probability an active member becomes disabled. We studied both occupational disability (no minimum service requirement to receive a monthly benefit) and non-occupational disability (requires vested status to receive a monthly benefit). The rates for both types were less than our current assumption. We recommend lowering the assumption in both cases.

Termination

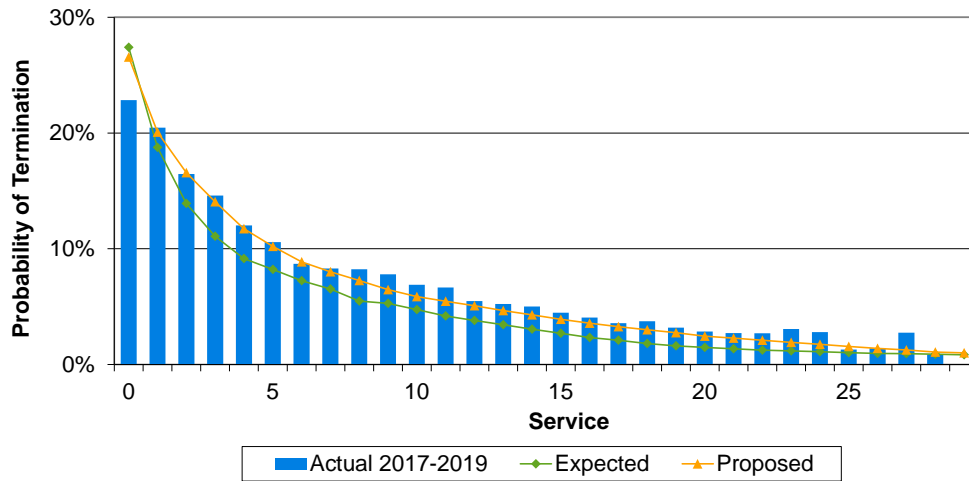
Section 9 summarizes the results of our study of terminations of employment for reasons other than death, service retirement, or disability. The actual terminations were somewhat higher than the terminations expected by the current rates; therefore, we recommend increasing the base assumed rates of termination at most service levels.

We also looked at the termination rates by employer. Based on this analysis, we recommend each employer be assigned to a termination group, which determines an adjustment (either higher, no adjustment, or lower) to the base rates. We recommend some changes in the termination group assignments for 145 employers, with recommendations of increases in the termination group for 123 employers and decreases for 22 employers. The recommended adjustments to the termination group assignments are based on observed experience over the past few studies and the size of the employer. The recommended termination groups are shown in Appendix C.

Note that the termination group assumption determines the adjustment (either higher or lower) from the base rates. If the employer has a middle termination group assignment, there is no adjustment to the base rates.

The following graph shows the results of the termination study.

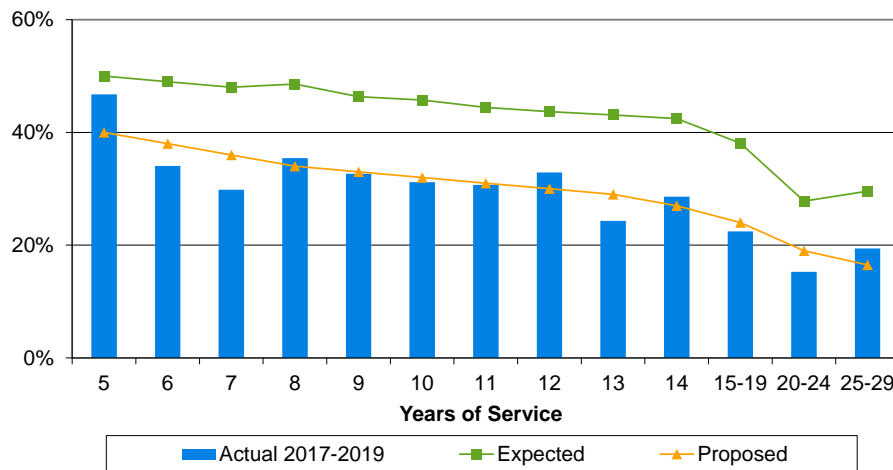
Termination Rates by Service Level



Probability of Refund

Section 10 discusses the probability an active member who terminates takes a refund of his or her contributions. We found that the actual refunds were less than expected based on the current rates. This continues a trend of declining elections of refunds that has been observed in the past few studies. We recommend reductions in the assumed rates of refund to reflect this experience. The following graph shows the results of the probability of refund study.

Probability of Refund



Postemployment Mortality

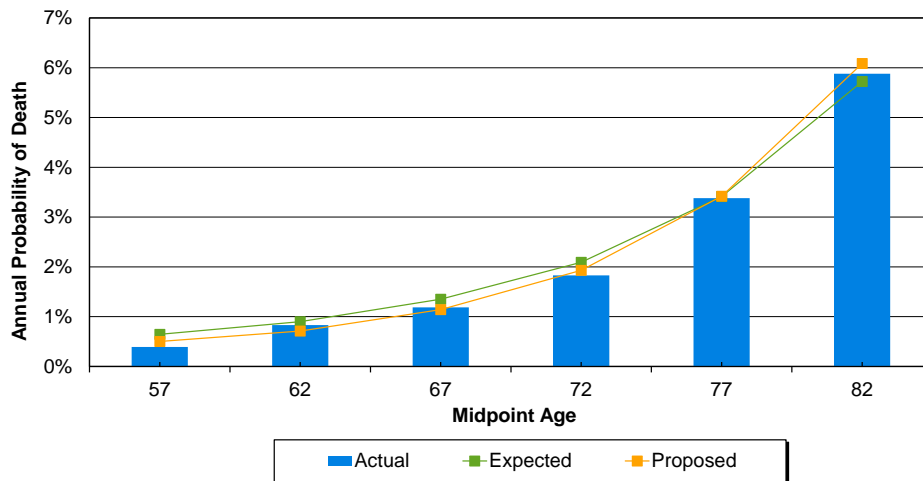
Section 11 discusses the annual probability a retired member (including disabled members) or beneficiary dies. While the results of this study were generally consistent with the current rates for the service retirees, we recommend updating the base mortality tables to be based on recent mortality tables published by the Society of

Actuaries that are based solely on public plan experience. Although the change to the newer table would result in changes by age, the overall impact would be relatively small. See Section 11 for details.

Note that the current mortality assumptions anticipate gradual increases in life expectancies through the use of a mortality improvement projection scale. This approach is sometimes referred to as generational mortality, as each succeeding generation is projected to live longer. We have recommended the scale used to project this mortality improvement be updated to reflect the most recent scale published by the Society of Actuaries. This change is expected to cause a relatively small decrease in the required rate.

The following graph shows the study results for the mortality of service retirees (male and female combined) along with our current (expected) and proposed assumptions inside various five-year age groupings.

Service Retiree Mortality



Miscellaneous Assumptions

Section 12 discusses some technical assumptions that are made to perform the valuation. We recommended changes to a few of these assumptions as described in this section and summarized in the table below. Individually and collectively, each of the proposed updates has a relatively minor effect on valuation results.

Summary of Recommendations

The following table summarizes our recommendations. The next section provides an overview of the estimated financial impact of each change, as measured by the estimated impact on employers required contribution rates.

Section	Assumption	Recommendation
3	Actuarial Methods	No changes.
4	Economic Assumptions	<ul style="list-style-type: none"> ▪ Investment Return: 7.50% (no change) ▪ General Wage Increase: 3.00% (no change) ▪ Payroll Increase: 3.00% maximum increase (no change). Some changes for individual employers.[See Appendix A]
5	Merit Salary Increases	Increase rates. [See Table D-1]
6	Active Member Mortality	Update rates to new base mortality table. [See Table D-4]
7	Service Retirement	Small decrease recommended overall. [See Table D-2]
8	Disability Retirement	Lower rates. [See Table D-3]
9	Termination	Increase in rates at most service levels and remove distinction by gender. Some changes to adjustments for individual employers. [See Appendix C and Table D-6]
10	Probability of Refund	Decrease in rates at most service levels. [See Table D-7]
11	Postemployment Mortality	Small reductions in mortality rates, varies by gender and retirement type. Updates to base mortality table and projection scale of future mortality improvement. [See Table D-5]
12	Miscellaneous Assumptions	
	Mortality for Optional Group Term Life	Change for consistency with active and retired mortality rates, and include discount to reflect current surplus. [See Tables D-4 and D-5]
	Annuity Election for Survivor Annuity Death Benefit (SADB)	100% of beneficiaries are assumed to select an annuity (no change).
	Adjustments for Plans with the Partial-Lump Sum Payment Option (PLSO)	Retain the assumption of 0.75% for the increased value of the benefit attributable to the partial lump sum option.
	Default Values (where data is missing)	Gender: 50% male and 50% female (no change). Birth Date: Based on current age of 34 + years of service + elapsed time since last deposit (no change).
	Option Elected at Retirement	Life only benefit with cash refund feature approximated by 4-year certain period (change from three years).
	Future Cost-of-Living Adjustments (COLAs)	For funding valuation purposes, no future COLAs are assumed. For financial reporting under GASB 68, future CPI COLAs are based on the prior COLAs adopted and assumed price inflation if the employer is determined to have a substantively automatic COLA (no change).
	Beneficiary Age and Gender	Beneficiaries are the opposite gender of the member and males are three years older than females (no change).
	Refund of Contribution Timing	Assume refund over 10-years following termination (active members), or from valuation date (deferred members). Change from immediate.
	Retirement Commencement for Current Deferred Members	Change to active service retirement rates starting at age 60.
	Retirement Commencement for Future Deferred Members	No change in assumed retirement age for this group (later of age 60 and earliest eligibility).

Estimated Impact on Required Contribution Rates

Overall, it is estimated the proposed changes in assumptions will reduce the required contribution rate in the 2021 valuation by 0.47% of pay in aggregate. As is generally the case with TCDRS, the impact will vary by employer. The following exhibits show how the recommended changes affect the System as a whole. A more detailed analysis by employer is presented in Appendix B.

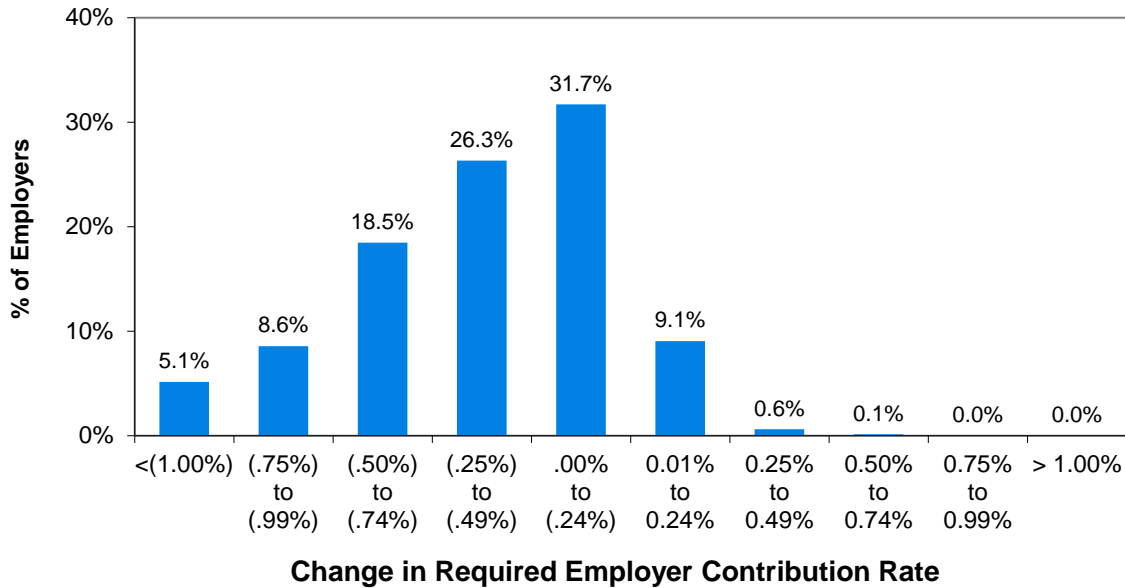
The most significant demographic change proposed is an increase in the rates of assumed termination. Higher rates of termination are projected to result in lower projected benefits and thus lower contributions needed in the future. This is somewhat offset by a decrease in the assumption that a member takes a refund of their contributions upon termination. All other proposed changes are projected to have a small impact on the required contribution rates. When all proposed assumption changes are combined, the projected impact is a decrease of 0.47% of payroll in aggregate for the required contribution rates.

The estimated required contributions rates using the proposed assumptions are based on the December 31, 2020 valuation which determined the 2022 required contribution rates. The proposed assumptions, if adopted by the Board, will first impact the December 31, 2021 valuation and 2023 required contribution rates, and the actual impact will vary based on changes in employers' demographics reflect in that valuation.

Additional information is provided (following the required contribution rate analysis) that focuses on the effective rate paid by the individual employers. The effective rate is the greater of the elected rate and required rate. For example, if the elected rate is 12.00% and the required rate changes from 12.30% to 11.80% due to the proposed assumption updates, the effective rate change is 0.30% of pay, decreasing from 12.30% to the elected rate of 12.00%.

Required Contribution Rate Analysis

**Hypothetical Impact on 2022 Required Employer Contribution Rates
Proposed Assumption Changes**

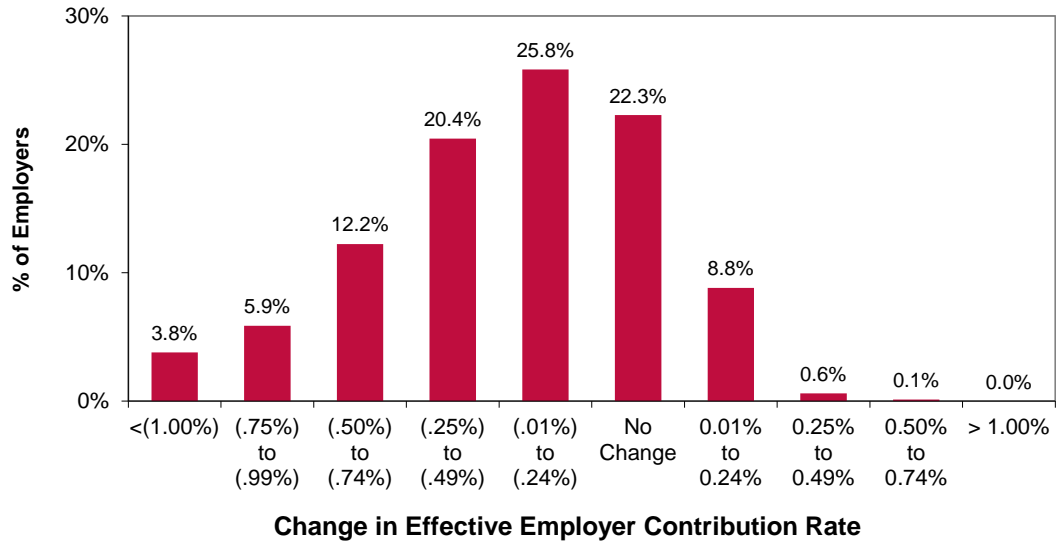


**Analysis of Change
Hypothetical Impact on December 31, 2020 Valuation
Proposed Assumption Changes**

Sources of Change	Weighted Contribution Rate	Aggregate Funded Ratio
Required Rate for 2022 (from 2020 Valuation)	12.94%	87.2%
Merit Salary & Individual Employer Payroll Growth	0.03%	0.0%
Service Retirement	0.00%	0.0%
Disability Retirement	0.00%	0.0%
Termination & Refund	-0.50%	-0.3%
Active & Retired Member Mortality	-0.09%	0.2%
Miscellaneous Assumptions	0.09%	-0.1%
Total Change due to Demographic Assumptions	-0.47%	-0.2%
Total Estimated Change	-0.47%	-0.2%
Hypothetical Required Rate for 2022 (2020 Val with proposed assumptions)	12.47%	87.0%

Effective Contribution Rate Analysis

**Hypothetical Impact on 2022 Effective Employer Contribution Rates
Proposed Assumption Changes**



2. Introduction

Funding and Valuation Principles

Just as certain investment choices have an associated investment risk, choices in actuarial assumptions have an associated actuarial risk. Our goal is to recommend actuarial assumptions that are reasonable estimates of future experience, while recognizing that it is highly unlikely that future experience will exactly track the assumptions.

Determining the adequacy of the current contribution rates is dependent on the assumptions we use to project the future benefit payments and then to discount the value of future benefits to determine the present values. Thus, it is important to understand the sensitivity of the actuarial calculations to the underlying assumptions.

- If actual future experience shows that the assumptions overestimate the ultimate cost of the plan, the long-term impact will not be realized until many years in the future when costs are lowered due to the current overstatement.
- If actual future experience shows that the assumptions underestimate the ultimate cost of the plan, future costs will increase which could lead to budgeting challenges and the possibility that employers will lower their plans' future benefits.

While our goal is to make a reasonable estimate of future experience, it is important to recognize that the future will almost certainly differ from our current efforts to forecast it. Routine scheduled reevaluations of the actuarial assumptions, such as through this experience investigation, are a sound method to identify where assumptions differ from emerging experience and to fine-tune the actuarial estimates to keep reasonably to emerging experience.

It is expected that there will be years in which the actual investment return will exceed the actuarial assumption, and there will be years when the actual experience will not meet the assumed rate. It is the annualized expected compound long-term rate that is used to actuarially project and finance the retirement benefits.

Recognition should be made that a higher investment return assumption will tend to require lower contributions in the short term, while a lower investment return assumption will tend to require higher contributions in the short term. Using a more conservative (i.e., lower) investment return assumption gives a greater likelihood of having actuarial experience gains in the future, whereas using a more aggressive (i.e., higher) investment return assumption implies a willingness to assume a greater actuarial risk of future experience losses.

The actuarial assumptions are usually divided into two groups: economic and demographic. The economic assumptions should just consider the long-term expectation of future economic growth. The non-economic, or demographic assumptions, are based on TCDRS' actual experience, adjusted to reflect trends, historical experience and future expectations. Thus, the economic assumptions tend to be more subjective than the demographic assumptions, and the demographic assumptions tend to be more dependent on the results of the experience study.

Overview

This report presents the results of an investigation of the recent actuarial experience of TCDRS. We will refer to this investigation as an experience study.

Throughout this report, we refer to "expected" and "proposed" actuarial assumptions. The expected assumptions are the ones we used for our actuarial valuation of TCDRS as of December 31, 2020. They may also be referred to as the "current" assumptions. These assumptions and methods were adopted by the Board based on Milliman's 2013-2016 Investigation of Experience. The economic assumptions were reviewed in detail in the first quarter of 2021, and the Board of Trustees adopted new economic assumptions at the March 11, 2021 meeting

The proposed, or recommended, assumptions are those we recommend for use in the valuation as of December 31, 2021 and for subsequent valuations until further changes are made.

The choice of economic assumptions (price inflation, investment return, general wage growth and payroll increase) is discussed in Section 4 of this report. These assumptions are generally chosen on the basis of the actuary's expectations as to the effect of future economic conditions on the operation of TCDRS. The setting of these assumptions is more subjective than in setting and recommending the demographic assumptions.

Sections 5 through 12 of this report will show the results of our study of demographic assumptions. The exhibits are detailed comparisons between actual and expected decrements (e.g., termination, retirement, death, or disability) on both the current and proposed assumptions. Each exhibit is identified by an alphanumeric corresponding to the section of the report. For example, Exhibit 7A is referred to in Section 7, retirement rates.

For most of the demographic assumptions, graphs show the actual, the expected, and the proposed rates (if applicable), usually by some combination of gender, plan, years of service, and age. The exhibits also show the total numbers of actual and expected decrements on either a benefit- or salary-weighted basis. Ratios of actual-to-expected results larger than 100% on the current basis generally indicate that the rates may need to be raised; ratios smaller than 100% indicate that rates may need to be lowered.

For each exhibit, the actual decrement rates are shown as bar graphs on either a quinquennial-age basis (five-year age groupings), a years-of-service basis, or, in the case of retirement rates, on an age-by-age basis. The current rates (the expected rates) used in the December 31, 2020 actuarial valuation are shown, as well as the new proposed assumptions, as line graphs. Therefore, the assumption changes we are proposing are illustrated by the difference between the two lines in each exhibit. Note that in cases where no change is being proposed, only the expected rate line is shown.

Actuarial Standard of Practice No. 35: Selection of Demographic Assumptions

Actuarial Standard of Practice No. 35 (ASOP 35) governs the selection of demographic and other non-economic assumptions for measuring pension obligations. ASOP 35 states that the actuary should use professional judgment to estimate possible future outcomes based on past experience and future expectations, and select assumptions based upon application of that professional judgment. The actuary should select reasonable demographic assumptions in light of the particular characteristics of the plan that is the subject of the measurement. A reasonable assumption is one that is expected to appropriately model the contingency being measured and is not anticipated to produce significant cumulative actuarial gains or losses over the measurement period.

ASOP 35 Steps

The actuary should follow these steps in selecting the demographic assumptions:

1. **Identify the types of assumptions.** Types of demographic assumptions include but are not limited to retirement, mortality, termination of employment, disability, election of optional forms of payment, administrative expenses, family composition, and treatment of missing or incomplete data. The actuary should consider the purpose and nature of the measurement, the materiality of each assumption, and the characteristics of the covered group in determining which types of assumptions should be incorporated into the actuarial model.
2. **Consider the relevant assumption universe.** The relevant assumption universe includes experience studies or published tables based on the experience of other representative populations, the experience of the plan sponsor, the effects of plan design, and general trends.

3. **Consider the assumption format.** The assumption format includes whether assumptions are based on parameters such as gender, age, service, and/or calendar year. The actuary should consider the impact the format may have on the results, the availability of relevant information, the potential to model anticipated plan experience, and the size of the covered population.
4. **Select the specific assumptions.** In selecting an assumption, the actuary should consider the potential impact of future plan design as well as the factors listed above.
5. **Select a reasonable assumption.** The assumption should be expected to appropriately model the contingency being measured and reflect the actuary's professional judgment and estimate of future experience. The assumption should not be anticipated to produce significant actuarial gains or losses.

ASOP 35 General Considerations and Application

Each individual demographic assumption should satisfy the criteria of ASOP 35. In selecting demographic assumptions, the actuary should also consider: the internal consistency between the assumptions, materiality, cost effectiveness, and the combined effect of all assumptions. At each measurement date, the actuary should consider whether the selected assumptions continue to be reasonable; however, the actuary is not required to do a complete assumption study at each measurement date. In our opinion, the demographic assumptions recommended in this report have been developed in accordance with ASOP 35.

3. Actuarial Methods

As part of this investigation, we have reviewed the actuarial methods. We are not recommending any changes to the methods.

Actuarial Cost Method

TCDRS uses the entry age actuarial cost method for all employers. The entry age method creates a theoretically level normal cost rate for each individual throughout his or her career. It is the method used by the majority of large retirement systems (85% of state-wide systems). We believe that this cost method continues to be appropriate for TCDRS' valuation and recommend no change.

Actuarial Asset Method

The current actuarial asset method used for the Subdivision Accumulation Fund (SAF) smooths actuarial investment gains and losses. Actuarial investment gains and losses are measured as the difference between the assumed and actual return on market assets. Key points of the actuarial asset method are:

- Five-year period: One-fifth of the actuarial investment gain or loss for each employer is recognized over a five-year period. A five-year smoothing period is used by a majority of large public retirement systems (60% of state-wide systems) and is the period we generally recommend to our clients. We recommend no change to this method.
- SAF and ESF combined: For purposes of calculating the actuarial investment gain or loss, the market value used in the calculation is based on the combined SAF and ESF fund values at the beginning and end of each year for each individual employer. This is consistent with how interest is allocated to individual employers. We recommend no change to this method.
- Offsetting of deferred amounts: In cases where the sum of the prior deferred actuarial gains and losses is an actuarial gain, any current year actuarial loss is offset against the oldest actuarial gain. If any of the current year actuarial loss remains after the initial offset, the remainder is offset against the next oldest gain, and so on. If the sum of prior deferred actuarial gains and losses is an actuarial loss and there is an actuarial gain for the current year, the current year gain is offset against the prior actuarial losses in a similar fashion. We recommend no change to this method.

This method allows for smoothing over some of the year-to-year volatility in investment returns which can adversely impact the required employer contribution rate, while still keeping the period short enough that the assets used in the valuation do not significantly deviate from current market values for too long of a period. We believe this method continues to be appropriate and are recommending no change to the actuarial asset method.

Amortization Method

The change in each employer's unfunded actuarial accrued liability (UAAL) attributable to each year is amortized over a closed 20-year period as a level percent of covered payroll, except for the following situations:

1. The UAAL attributable to benefit increases in a given year is amortized over a closed 15-year period as a level percent of covered payroll.
2. If there is an overfunded actuarial accrued liability, the amortization period is an open 30-year period as a level percent of covered payroll.
3. If a UAAL decrease occurs due to extra employer contributions (lump sum or elected rate greater than required rate), that decrease is offset against the oldest existing actuarial loss layer.

We recommend no change to the amortization method.

4. Economic Assumptions

Background

Actuarial Standard of Practice (ASOP) No. 27, Selection of Economic Assumptions for Measuring Pension Obligations, provides guidance to actuaries giving advice on selecting economic assumptions for measuring obligations under defined benefit plans. Because no one knows what the future holds with precision, the best an actuary can do is to use professional judgment to estimate possible future economic outcomes. These estimates are based on a mixture of past experience, future expectations, and professional judgment. The actuary should consider a number of factors, including the purpose and nature of the measurement, and appropriate recent and long-term historical economic data. However, the standard explicitly advises the actuary not to give undue weight to recent experience. To meet the standard, the assumption should reflect “the actuary’s estimate of future experience” and “it has no significant bias (i.e., it is not significantly optimistic or pessimistic)..”

After completing the selection process, the actuary should review the set of economic assumptions for consistency. This may lead the actuary to recommend the same inflation component in each of the economic assumptions proposed.

The economic assumptions were reviewed in detail in the first quarter of 2021. The Board of Trustees adopted new economic assumptions at the March 11, 2021 meeting, which included a 0.5% reduction in the investment return assumptions and 0.25% reductions in the price inflation, general wage growth and maximum payroll growth assumptions. These assumptions were used in the December 31, 2020 actuarial valuation and are therefore the current assumptions referred to in this report.

We believe the current economic assumptions are reasonable and satisfy ASOP No. 27. We have not recommended any changes. The following table shows these assumptions.

Economic Assumptions	Current Assumptions
Investment Return ⁽¹⁾	7.50%
General Wage Growth	3.00%
Payroll Growth ⁽²⁾	3.00% or less
Price Inflation	2.50%

1. Net of both investment and administration expenses.

2. The actual payroll increase assumption varies by plan based on experience and size of the employer. Recommended changes to individual employers are shown in Appendix A.

1. Price Inflation

Use in the Valuation

When we refer to inflation in this report, we are generally referring to price inflation. The inflation assumption has an indirect impact on the results of the actuarial valuation through the development of the assumptions for general wage increases and payroll increases. It does not have a direct impact on the funding valuation results, but for some employers it can have a direct impact on their financial reporting valuation. For those employers with a substantively automatic COLA under GASB 68, the price inflation assumption may impact assumed future COLAs.

The current and recommended assumption for inflation is 2.5% per year.

Historical Perspective

The data for inflation shown below is based on the national Consumer Price Index, US City Average, All Urban Consumers (CPI-U) as published by the Bureau of Labor Statistics.

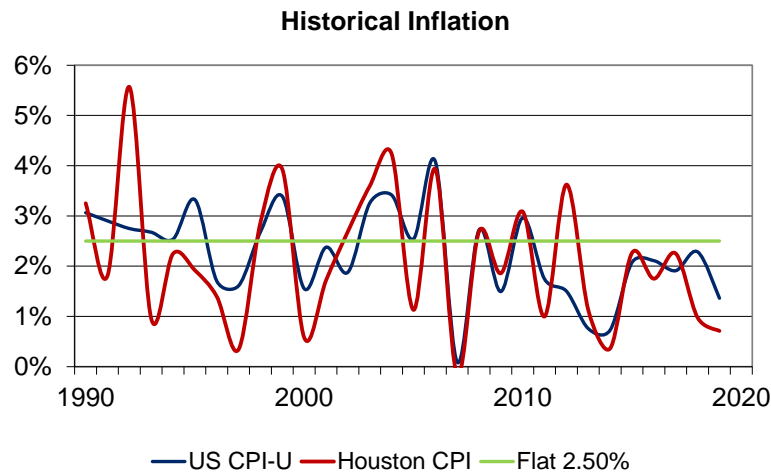
Although economic activities in general, and inflation in particular, do not lend themselves to prediction on the basis of historical analysis, historical patterns and long-term trends are a factor to be considered in developing the inflation assumption.

There are numerous ways to review historical data, with significantly differing results. The table below shows the compounded annual inflation rate for various 10-year periods, and for the 50-year period ended in December 2020. Note that the 50-year average is heavily influenced by the inflation of the late 1970s and early 1980s. The last 30 years have averaged closer to the current assumption, with a 30-year average of 2.2%.

Decade	CPI Increase
2011-2020	1.7%
2001-2010	2.3%
1991-2000	2.7%
1981-1990	4.6%
1971-1980	7.8%
Prior 50 Years	
1971-2020	3.8%

The above table shows national statistics. As TCDRS invests on a national and global basis, the inflation assumption as it relates to the investment return assumption should be based on national and even global inflation. However, actual wage growth and payroll growth for TCDRS members and employers is more closely tied to the Texas economy and is only indirectly affected by the national economy. We believe that although there have been historical differences between U.S. and Texas CPI changes, in the long term there should be a high correlation. For comparison, the average CPI increase for the Houston area has been 2.1% for the 30-year period 1990-2020, compared to the national average of 2.2%. Similarly, the average CPI for the Dallas-Fort Worth area over the same period was also 2.1%.

The following graph shows historical national CPI increases (blue line) along with CPI increases for the Houston area (red line) along with the current assumption (green line).



Forecasts of Inflation

Since the U.S. Treasury started issuing inflation-indexed bonds, it is possible to determine the approximate rate of inflation anticipated by the financial markets by comparing the yields on inflation-indexed bonds (TIPS) with traditional fixed government bonds. Current market prices as of beginning of October 2021 suggest investors expect inflation to be about 2.3% over the next 30 years.

Additionally, we reviewed the expected increase in the CPI by the Office of the Chief Actuary for the Social Security Administration. In the 2021 Trustees Report, the projected average annual increase in the CPI over the next 75 years under the intermediate cost assumptions was 2.4%.

Price Inflation Recommendation

The price inflation assumption is not used in determining TCDRS’ funding and thus has no direct impact on the required contribution rates; however, it is a factor in our recommendations for the wage growth and payroll growth assumptions. The current assumption is close to the long-term inflation implied by TIPS and the long-term forecast of Social Security.

We recommend retaining the long-term assumed inflation rate of 2.5%.

Consumer Price Inflation	
Current Assumption	2.50%
Recommended Assumption	2.50%

2. Wage Growth

Use in the Valuation

Estimates of future salaries are based on two types of assumptions: 1) general wage increase and 2) merit increase. Rates of increase in the general wage level of the membership are directly related to inflation, while individual salary increases due to promotion and longevity occur even in the absence of inflation. The promotion and longevity assumptions, referred to as the merit scale, will be reviewed with the other demographic assumptions.

The current assumption is for 0.5% general wage growth above the inflation assumption.

Historical Perspective

We have used statistics from the Social Security Administration on the National Average Wage back to 1971.

There are numerous ways to review this data. For consistency with our observations of other indices, the table below shows the compounded annual rates of wage growth for various 10-year periods, and for the 50-year period ended in 2020. The excess of wage growth over price inflation represents productivity, or the increase in the standard of living (also called the real wage inflation rate).

Decade	Wage Growth (a)	CPI Increase (b)	Real Wage Inflation (a) - (b)
2011-2020	2.8%	1.7%	1.1%
2001-2010	2.6%	2.3%	0.3%
1991-2000	4.3%	2.7%	1.6%
1981-1990	5.3%	4.6%	0.7%
1971-1980	7.3%	7.8%	-0.5%
Prior 50 Years			
1971-2020	4.5%	3.8%	0.7%

For TCDRS employees, during the study period we estimate the average real wage growth from 2016 to 2019 was 0.6%.

Forecasts of Future Wages

Wage inflation has been projected by the Office of the Chief Actuary of the Social Security Administration. In the 2021 Trustees Report, the ultimate long-term annual increase in the National Average Wage is estimated to be 1.2% higher than the Social Security intermediate cost inflation assumption of 2.4% per year.

Recommendation

Over the last 50 years, the actual experience, on a national basis, has been relatively close to the current assumption. We believe that wages will continue to grow at a greater rate than prices over the long term, although not to the extent projected by Social Security. We recommend that the long-term assumed real wage inflation rate remain at 0.5% per year.

Real Wage Inflation Rate	
Current Assumption	0.50%
Recommended Assumption	0.50%

The wage growth assumption is the total of the consumer price inflation assumption and the real wage inflation rate. If the real wage inflation assumption remains at 0.5% and the price inflation assumption remains at 2.5%, this would result in a total wage growth assumption of 3.0%. Note that the active population headcount is assumed to remain stable.

Payroll Increase by Individual Employer

In addition to setting wage growth assumptions for individual members, we also reviewed the actual changes in payroll for individual employers. The aggregate payroll of TCDRS is expected to increase, without accounting for the possibility of an increase in active membership. The payroll increase assumption for each individual employer is set equal to the general wage growth assumption with adjustments for individual employers based on size and experience, which in some cases results in a payroll growth assumption of 0%, particularly for smaller employers.

The UAAL (or, if assets exceed the AAL, Overfunded Actuarial Accrued Liability) is amortized as a percentage of payroll in determining future contribution rates as a percentage of payroll. Changes in the payroll growth assumption will cause a change in the required percentage of payroll needed.

Payroll growth increases that are lower than expected cause increases in the required contribution rate as a greater percentage of payroll will be required to fund the UAAL. Likewise, payroll growth increases that are greater than expected cause decreases in the required contribution rate, as a lower percentage of payroll will be required to fund the UAAL.

Our recommended payroll growth assumptions for individual employers are shown in Appendix A. For employers where we are recommending a change in this assumption, we have put a box around the proposed assumption. Our recommendations are based on the following:

- Size:** Small employers tend to have more volatility in their payroll. By assigning a lower payroll increase assumption to these employers, we reduce the probability that the actual payroll will be less than the expected payroll since when the actual payroll increase falls short of the assumption and the employer has a UAAL, it results in an increase in the required contribution rate. Therefore, in general we have assigned lower payroll increase assumptions to smaller employers as a conservatism measure.
- Experience:** There is some correlation between historical and future increases in payroll. For example, urban counties have experienced larger increases in payroll than rural counties. We would expect this trend to continue in the future. We have looked at the actual increase in payroll over the current (2017-2020) as well as the three prior (2005-2008, 2009-2012, and 2013-2016) study periods. For employers that have experienced increases in payroll greater than the assumption, we have considered increasing the assumption. Similarly, we have considered lowering the assumption for employers with low increases or decreases.

- **Minimum / Maximum:** The payroll increase for an individual employer is never set to be greater than the proposed general wage growth assumption of 3.0% nor less than 0.0%.

We have recommended increases in the payroll assumption for 24 employers and decreases for 9 employers. Based on their size and experience over the last 4 to 16 years, we felt that it was appropriate to increase or decrease the payroll growth assumption for those employers. All changes were 1.0% or less except for one employer that entered TCDRS as a very small employer but is now a large employer.

Estimated Impact on Required Contribution Rates

For all employers in total, the estimated impact on the required contribution rates of the proposed changes in the payroll growth assumption is no change in the aggregate required employer contribution rate when rounding to the nearest 0.01% of payroll. The estimated combined impact of the payroll growth changes by individual employer is shown in Appendix B of this report.

3. Investment Return

Use in the Valuation

The investment return assumption is one of the primary determinants in the calculation of the expected cost of TCDRS employers' benefits, providing a basis to discount future benefit payments that reflects the time value of money. This assumption has a direct impact on the assumed TCDRS investment earnings allocation to employers, which in turn affects the calculation of liabilities and required employer contribution rates. The current investment return assumption for TCDRS is 7.5% per year, net of administrative and investment-related expenses.

Expected Investment Return

Cliffwater, TCDRS' investment consultant, has calculated the expected return of TCDRS' portfolio as 7.6% based on their 2021 capital market assumptions. The 7.6% is the forward-looking 10-year expected average annual rate of return and is the median return on a geometric basis for TCDRS' target portfolio. That is, in Cliffwater's model there is a 50% probability the return will exceed 7.6% and a 50% probability the return will be less than 7.6% compounded over a 10-year period based on these capital market assumptions.

We independently calculated the expected investment return using Cliffwater's 2021 assumptions for capital markets and TCDRS' current target asset allocation and verified that Cliffwater's 7.6% calculation is reasonable. The target asset allocation, along with Cliffwater's capital market assumptions, is summarized in the following table:

	Allocation	Expected Return ⁽¹⁾	Standard Deviation
U.S. Equities	11.5 %	6.3 %	17.0 %
Int'l Equities - Developed Markets	5.0	6.3	18.0
Int'l Equities - Emerging Markets	6.0	6.8	26.0
Global Equities	2.5	6.6	17.7
Investment-Grade Bonds	3.0	1.2	4.0
Cash Equivalents	2.0	1.3	2.0
Distressed Debt	4.0	7.7	11.0
REIT Equities	2.0	5.5	22.0
Private Real Estate Partnerships	6.0	6.9	30.0
Private Equity	25.0	9.3	20.0
Hedge Funds	6.0	3.9	4.4
Master Limited Partnerships (MLPs)	2.0	7.1	24.0
Strategic Credit	9.0	4.1	5.9
Direct Lending	16.0	8.7	8.0
Total	100.0 %	7.6 %	12.7 %

1. 10-year expected geometric return based on Cliffwater's capital market assumptions.

However, there are a number of other factors that should be considered in setting the investment return assumption. In particular, Cliffwater, like most other investment consultants, bases their capital market

assumptions on a 10-year time horizon. Consideration should be given to the longer-term time horizon of pension liabilities. The potential impact of the longer-term perspective and other factors is discussed later in this section.

Administrative and Investment-Related Expenses

The investment return used for the valuation is assumed to be net of all administrative and investment-related expenses. The following table shows the ratio of administrative expenses to the TCDRS’ assets over the last eight years. The expense ratio is calculated as the administrative expense amount divided by the beginning asset balance at fair market value.

(\$millions)			
Year	Market Assets	Admin. Expense	Expense Ratio
2013	\$ 19,885	\$ 18	0.09%
2014	23,146	18	0.08
2015	24,715	18	0.07
2016	24,530	20	0.08
2017	26,287	20	0.08
2018	30,000	23	0.08
2019	29,261	26	0.09
2020	33,834	27	0.08

For the administrative expenses, we have assumed no change in the current assumption of 0.1% of market assets, although we note that actual administrative expenses have been running slightly lower than that over the last several years.

Annual investment expenses were 0.13% of the market value of assets for the most recent period. However, for purposes of our analysis of the investment return assumption, we have not made any further adjustment to the expected return for investment expenses, as it our understanding that investment expenses are accounted for in Cliffwater’s capital market assumptions for alternative asset classes, which is the majority of TCDRS investment expenses. Further, for asset classes where passive management is available, TCDRS would not use active management unless there was an expectation that the returns net of fees would be at least as great as the net return using passive management.

The expense assumption does not have a direct impact on the actuarial valuation results under the current methods, but it does provide a measure of gross return on investments that will be needed to meet the actuarial assumption used for the valuation. For example, the current investment return assumption is 7.5%, so TCDRS needs to earn a gross return (after adjustment for administrative and investment expenses) on its assets of 7.6% in order to net the 7.5% for funding purposes. Note that this is a theoretical calculation that assumes no adjustment for investment expenses, so the “break-even” point will be slightly higher under current practice. For purposes of the analysis of the investment return assumption, we have assumed a 0.1% reduction due to all expenses.

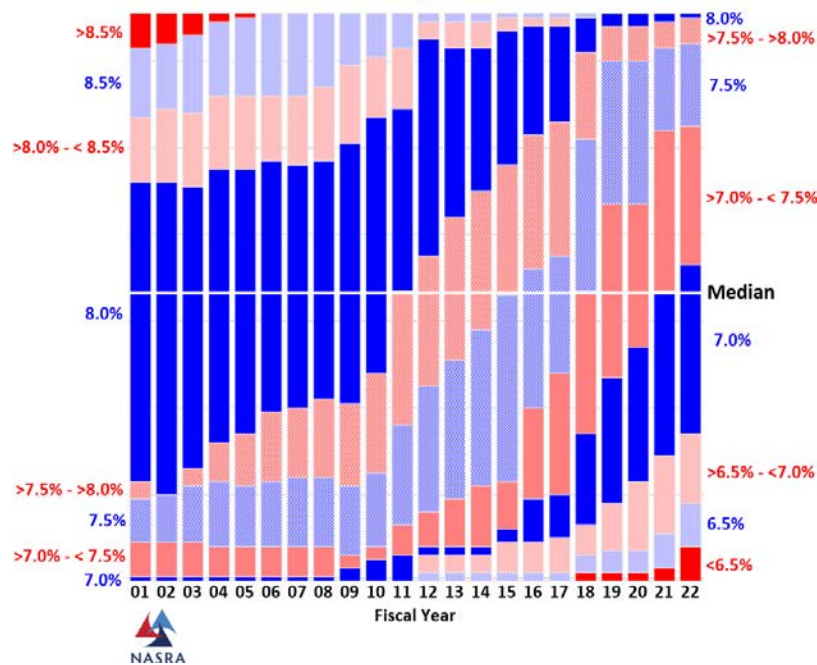
Additionally, we recommend the 0.1% adjustment for administrative expenses be added to the investment return assumption adopted to determine the discount rate used in the GASB 68 valuations for TCDRS employers, as GASB requires the discount rate to be the long-term expected rate of return gross of administrative expenses. Therefore, we are recommending a 7.6% discount rate be used for GASB 68 valuations.

Peer System Comparison

According to the Public Fund Survey, the average investment return assumption for statewide systems has been steadily declining. As of the most recent study, the median rate is 7.0%. The following chart shows a progression of the distribution of the investment return assumptions. In 2001, less than 10% of systems had an assumption less than 7.5%. As of October 2021, about 80% of systems have an assumption than is less than 7.5%.

It should be noted that the assumptions of the other systems are generally based on asset allocations that are significantly different from the TCDRS portfolio, so this is not a pure “apples-to-apples” comparison. However, it does give some idea how TCDRS might be perceived in relationship to its peers. Note that our analysis shows that the expected return for the average public plan asset allocation reported in the November 2020 NASRA Public Fund Survey is approximately 1% less than the expected return for the TCDRS portfolio using the same capital market assumptions.

Distribution of Investment Return Assumptions



Variance in Capital Market Assumptions

Different investment consultants will have different capital market assumptions. Note that we have primarily used Cliffwater’s capital market assumptions in our analysis, as we believe they are the most familiar with TCDRS’ complex investments. To provide an idea of how Cliffwater’s capital market assumptions relate to other investment consultants, we calculated the expected return using TCDRS’ asset allocation and the average of the capital market assumptions used by other investment consultants (*Horizon Survey of Capital Market Assumptions – 2021 Addition*). Based on this analysis, we found the expected short-term return (10 years or less) gross of administrative expenses was 6.9%, which is less than the 7.6% forecast by Cliffwater.

As previously noted, 10 years is a fairly short time horizon when considering the long-term nature of pension liabilities. Using the average long-term (20 years or more) capital market assumptions from the Horizon Survey, we calculated an expected return of 7.9%.

Reasonable Investment Return Assumptions

We considered both Cliffwater's analysis and Milliman's separate analysis of the expected return in our recommendation of the investment return assumption. Cliffwater's analysis provides a gross expected 10-year annualized return of 7.6%. This is technically referred to as a geometric return and is often used to represent a median return. Subtracting 0.1% for administrative expenses produces an expected net return of 7.5%. Therefore, in our professional judgment and using Cliffwater's capital market assumptions, 7.5% is a reasonable assumption for valuation purposes and is not significantly optimistic or pessimistic.

Milliman's separate analysis using the Horizon Survey shows the 7.5% is somewhere in-between the short- and long-term expectations of other investment consultants. Therefore, in our professional judgment and using the Horizon Survey, 7.5% is a reasonable assumption for valuation purposes and is not significantly optimistic or pessimistic.

We believe the 7.5% assumption is reasonable based on Actuarial Standard of Practice No. 27 (ASOP 27). The following excerpts from ASOP 27 with brief commentary are particularly relevant.

Section 3.6 Selecting a Reasonable Assumption—*The actuary should select reasonable economic assumptions. For this purpose, an assumption is reasonable if it has the following characteristics:*

- a. *It is appropriate for the purpose of the measurement;*
- b. *It reflects the actuary's professional judgment;*
- c. *It takes into account current and historical data that is relevant to selecting the assumption for the measurement date, to the extent such relevant data is reasonably available;*
- d. *It reflects the actuary's estimate of future experience, the actuary's observation of the estimates inherent in market data, or a combination thereof; and*
- e. *It has no significant bias (i.e., it is not significantly optimistic or pessimistic), except when provisions for adverse deviation or plan provisions that are difficult to measure are included and disclosed under section 3.5.1, or when alternative assumptions are used for the assessment of risk in accordance with ASOP No. 51.*

We believe 7.5% meets the criteria set forth for being reasonable.

Section 3.5.6 Other Sources of Economic Data and Analyses—*When the actuary is responsible for selecting or giving advice on selecting economic assumptions, the actuary may incorporate economic data and analyses from a variety of other sources, including representatives of the plan sponsor and administrator, investment advisors, economists, and other professionals. However, the selection or advice should reflect the actuary's professional judgment.*

In our professional judgment, Cliffwater is an expert with specialized knowledge in the asset classes that comprise the TCDRS asset allocation, and their view is reasonable.

Inflation as a Component of the Investment Return Assumption

Economists generally recognize a long-term relationship between inflation and investment returns. The basic principle is that the investors demand a "real return" – the excess of actual investment returns over inflation. If inflation rates are expected to be high, investors will demand investment returns that are also expected to be high enough to exceed inflation, while lower inflation rates will result in lower expected investment returns, at least in the long run.

Our analysis has focused on the nominal expected return. It should be noted that the inflation assumption implicit in the capital market assumptions used by Cliffwater and most investment consultants in the Horizon Survey is lower than the valuation assumption of 2.5%. As noted, a higher inflation assumption will generally lead to a

higher expected return in the long term; however, in the short term inflation can often have a negative impact on returns. If this difference were accounted for, it would result in a slightly higher expected return; however, it does not affect our view that 7.5% continues to be a reasonable assumption.

Long-Term vs. Short-Term Perspective

The 10-year time horizon used in the capital market assumptions is shorter than actuaries often use for valuing pension liabilities. In the longer term, there may be some expectation for slightly lower or higher returns. For example, if inflation averages 2.5% per year (compared to Cliffwater's 10-year assumption of 2.0%), this should ultimately result in higher yields on fixed income. This would lead to higher returns in the long term, although, in the short term this could have a negative impact. A less mature asset class like direct lending might face increased competition for opportunities in the future which might ultimately result in lower long-term expectations than those included in Cliffwater's 10-year assumptions.

Although we believe a long-term perspective is optimal for valuing the overall liabilities of TCDRS, it should be noted that the investment return assumption is also used for valuing the additional cost of adopting ad-hoc retiree COLAs, which have a much shorter time horizon for the associated liabilities.

Earnings Allocation

The investment return assumption is a measure of how much the assets are expected to return on an annual basis after deducting expenses. Note that this assumes the investments earn the assumed rate of return throughout the year, which is consistent with how the capital market assumptions are applied. It is also consistent with how the valuation uses the return assumption to discount future payments in the calculation of the actuarial liabilities.

The interest credited to each TCDRS plan on December 31 of each year is based on plan assets at the beginning of the year. Currently, the aggregate plan assets are in a moderately negative cash flow position (contributions are less than benefit payments), and this is projected to continue in the future, although it should be noted that employer contributions are projected to increase in 2022 due to recent increases required contributions. This negative cash flow position means the average balance during the year is less than the beginning balance (before accounting for interest crediting). The result of the crediting policy is that more than 7.5% needs to be earned on the total fund used for interest allocation (ESF plus SAF) to credit 7.5%, or reserves will need to be used.

The purpose of these comments is to point out the interest discount and the investment return assumption are on a slightly different basis. Since the investment return assumption is consistent with how the benefit payments are discounted, we do not believe any adjustment needs be made to the investment return assumption due to this difference.

The current reserve funds (Endowment Fund, Income Fund and Expense Fund) are equal to \$1.04 billion. For valuation purposes, no return is assumed to be earned on the reserves. Therefore, any returns earned on these funds can be used to either increase the reserves or add to the employer interest credits. If the aggregate fund earns 7.5% in 2021, we estimate the return on the reserves could be used to credit an additional 0.22% on the employer accounts. If this approach were used going forward, the additional credit would decline over time. For our analysis of the investment return assumption, we have not reflected the small positive impact of the reserves.

The GTLF and CSARF receive a 7.0% return as set in statute. To the extent the total fund earns over 7.0%, this allows TCDRS to use this excess return to provide a higher interest credit to employer accounts (or set aside with the reserves). Conversely, a return less than 7.0% would still require the GTL and CSARF to be credited with 7.0%, so this would either result in a lower interest credit or the use of reserves. However, given the size of these two funds (less than 0.2% of the total assets), this should not materially impact the overall return. Note that

although the GTLF is pooled with the TCDRS' pension assets for investment purposes, the GTL benefit obligations are separate from the TCDRS' benefit obligations

Conclusion

We recommend TCDRS retain its 7.5% investment return assumption. The current assumption is consistent with the expected return projected by Cliffwater and is reasonable when considering other investment consultants. We believe the current 7.5% assumption is reasonable based on the Actuarial Standards of Practice.

Investment Return (net of expenses) ⁽¹⁾	
Current Assumption	7.50%
Recommended Assumption	7.50%

1. Note that the investment return assumption used for discounting future benefit payments from the Closed Subdivision Annuity Reserve Fund (CSARF) is fixed at 7.0% for consistency with the interest crediting on that fund.

Estimated Impact on Required Contribution Rates

If the current investment return assumption is retained, there will be no impact on required contribution rates. The financial impact of the recommended changes in the payroll assumption by employer is included with the merit salary assumption in the next section.

5. Merit Salary Increases

As discussed in Section 4, estimates of future salaries are based on assumptions for two types of increases:

1. Increases in the general wage level of the membership, which are directly related to price inflation and increases in general productivity; and
2. Increases in each individual's salary due to merit increases. Note that when we refer to merit increases, these include any increases in excess of general wage inflation, such as merit, longevity or other factors.

In this section we will study the second of these rates, increases due to merit.

Results

Overall, we found that observed merit increases were greater than the current assumptions projected. Merit increases are currently based on two factors. We studied each of these factors to see if they were significant, and, if so, what the impact was. Our findings are as follows:

- **Service:** In studies of other retirement systems, we have found years of service to have the most significant impact on merit increases, with members in the early stages of their careers tending to receive larger (as a percent of current pay) merit increases. We found this also to be true with TCDRS.
- **Entry Age:** For TCDRS and other retirement systems, members with younger entry ages tend to receive larger (as a percent of current pay) merit increases than older members with the same years of service. As shown in Exhibit 5B, members at younger entry ages received larger merit increases during the study period, so our recommended rates reflect the impact of entry age.

Recommendation

We recommend increases in the rates of merit salary increase at most service levels as shown in Exhibit 5A. The rates are also shown numerically in Appendix D.

Methodology

In studying merit increases, we first calculated the increase in member salaries due to the average general wage inflation for the three years of this study (2017-2019) to be 2.74% per year. For each individual, we then calculated the total salary increase by comparing the salaries for each pair of consecutive years during the study period. These results were aggregated and the merit increase was then identified by removing the wage inflation portion from the total salary increase and comparing the beginning and ending years. Note that due to the difficulty of precisely identifying the general wage inflation in an individual year and because of the year-to-year volatility in general wage inflation, we combined the results for the current three-year period with results for the prior 12 years, weighting 25% for the most current period and 75% for the combined prior three periods. This helps smooth out the potential deviations in any given year while giving greater weight to recent experience.

Estimated Impact on Required Contribution Rates

The recommended changes in merit salary rates combined with the individual employer payroll growth assumption changes are expected to increase the aggregate average required contribution rate by 0.03% of payroll.

Exhibit 5A
Merit Salary Increases by Service

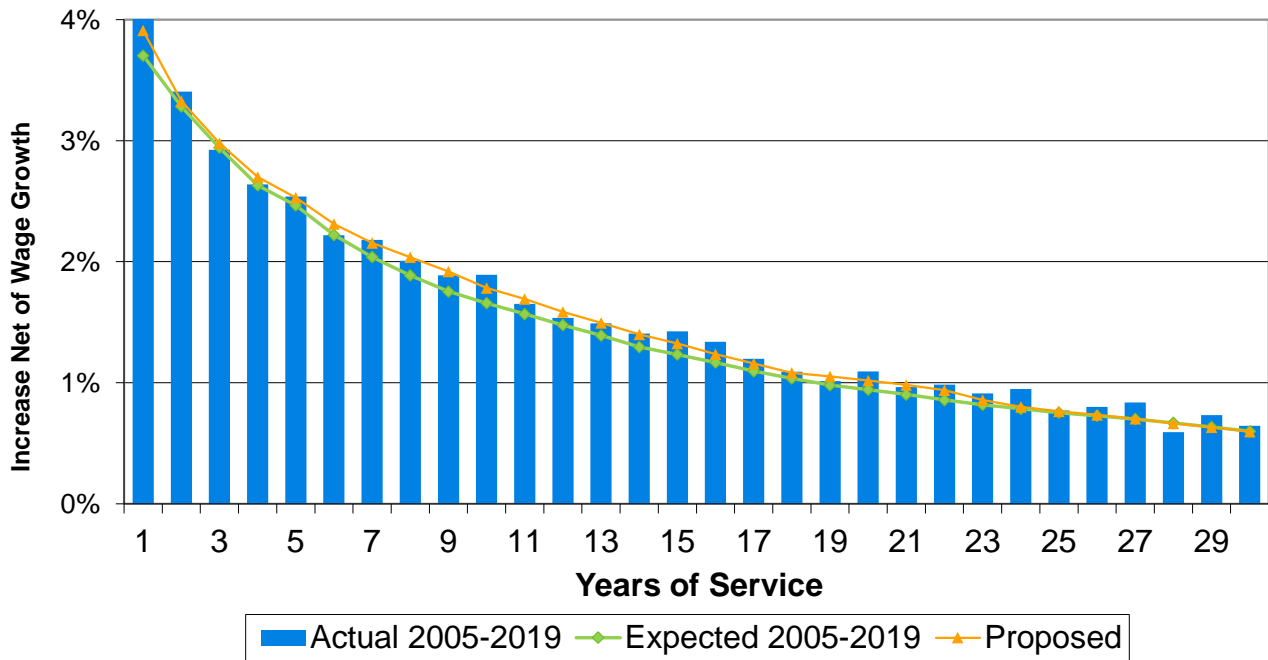
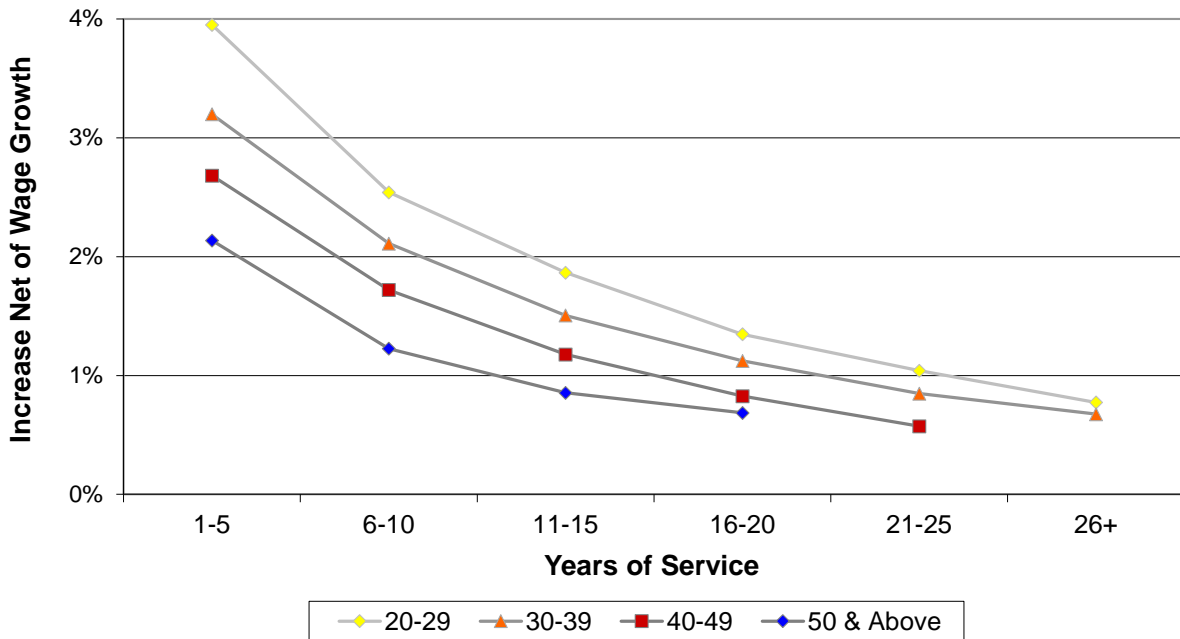


Exhibit 5B
Actual Merit Salary Increases by Entry Age



6. Death from Active Status

We studied rates of mortality among active contributing members. At any given age, the current assumption is a lower probability of death for an active member than for a retired member. We feel this is reasonable as, on average, a person who is actively working tends to be healthier, and therefore less likely to die, than a retiree of the same age. This approach is also consistent with mortality studies performed by the Society of Actuaries.

Results

Overall, we found there were slightly fewer deaths than the current rates projected. The following is a comparison of the actual-to-expected deaths of active members by gender for this study period.

Active Member Death Summary ⁽¹⁾			
	Actual	Expected	A/E
Male	21,468	21,868	98%
Female	9,240	9,383	98%
Total	30,708	31,251	98%

1. Results are weighted by annual salary and shown in \$1,000s.

These results are weighted by annual salary (\$1,000s). That is, in total, active contributing members with annual salaries totaling about \$31.3 million were expected to die during the study period, and the actual number was closer to \$30.7 million.

Exhibits 6A and 6B show the results of the study graphically. The rates are currently based on two factors. We studied each of these factors to see if they were significant, and, if so, what the impact was. Our findings are as follows:

- **Age:** Members at older ages tend to have a greater probability of dying than younger members.
- **Gender:** Male members tend to have a greater probability of dying than females at any given age. This trend is generally true for all mortality studies, and we found this to be true with TCDRS.

We believe there is sufficiently credible active mortality experience to recommend these adjustments to the standard mortality tables.

Recommendation

We recommend modifying the current rates for death from active member status as shown in Exhibits 6A and 6B. The proposed rates reflect the most recent employee mortality tables published by the Society of Actuaries that are specific to public sector employees. We also recommend updating the mortality improvement scale. Both the new public plan specific mortality tables and the new mortality improvement scale are discussed in more detail in Section 11. The active mortality rates are also shown numerically in Appendix D.

Estimated Impact on Required Contribution Rates

The estimated impact on the required contribution rates of the proposed change in the active mortality is combined with the postemployment mortality assumptions and is discussed at the end of Section 11.

Exhibit 6A
Active Member Death Rates by Age - Male

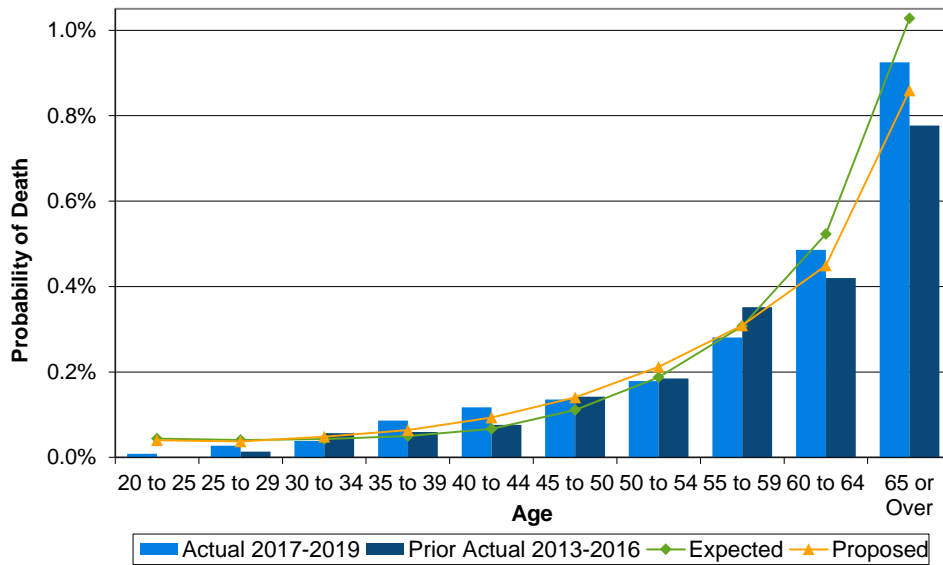
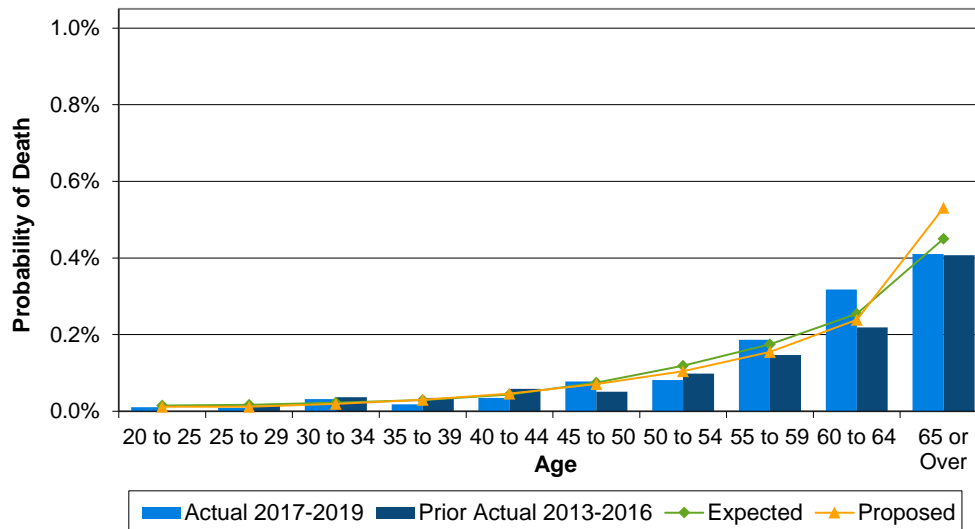


Exhibit 6B
Active Member Death Rates by Age - Female



Active Member Death Summary ⁽¹⁾					
	Actual	Expected	A/E	Proposed	A/P
Male	21,468	21,868	98%	21,390	100%
Female	9,240	9,383	98%	9,050	102%
Total	30,708	31,251	98%	30,440	101%

1. Results are weighted by annual salary and shown in \$1,000s.

7. Service Retirement

Exhibits in this section present comparisons of actual service retirements during the study period with those expected according to the actuarial assumptions used in our December 31, 2020 valuation. We found that actual retirement rates during the study period were somewhat lower than the expected rates. This result is consistent with what the recent experience we have observed with other public sector retirement systems; that is, members are retiring at later ages. We also performed additional analysis by service level and found a correlation between service and rates of retirement.

Results

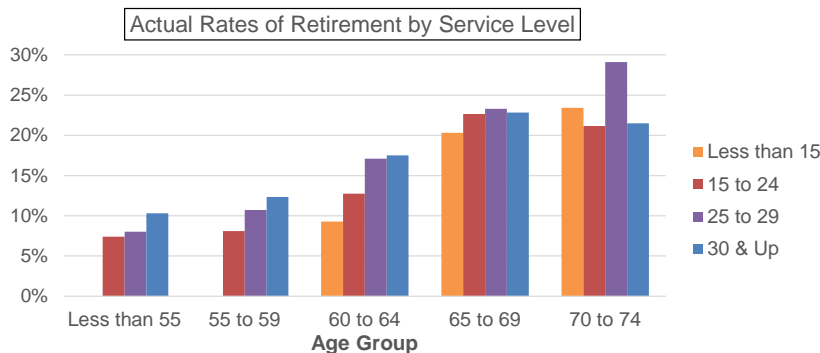
Overall, we found there were fewer retirements than expected with the current rates. The following is a comparison of the actual-to-expected service retirements (weighted by annual salary) of active members by age for this study period.

Retirement Summary ⁽¹⁾			
	Actual	Expected	A/E
Under 50	27,263	32,031	85%
50-54	81,657	87,202	94%
55-59	125,835	130,826	96%
60-64	181,761	198,239	92%
65-69	129,545	136,292	95%
70-74	39,374	38,235	103%
Total	585,436	622,825	94%

1. Results are weighted by annual salary and shown in \$1,000s.

Retirement rates are currently based on age. We studied both age and gender to see if these were significant, and, if so, what the impact was. In addition, we also looked at years of service. Our findings are as follows:

- **Age:** Probabilities of retirement tend to be higher at ages 62 and above than at earlier ages. Additionally, there tend to be even higher rates at ages 62, 65, and 66, mainly due to the impact of Medicare and Social Security. We found a similar pattern with TCDRS.
- **Gender:** The current rates assume that males and females will not have materially different probabilities of retirement at a given age. In this study, we found this continued to be true. This is shown graphically in Exhibit 7B.
- **Service:** The current rates do not differentiate by the member's years of service. We analyzed service retirement rates at different levels of service and found that members with greater years of service tend to have a higher probability of service retirement, particularly at ages less than 65. This is shown in the following graph.



Recommendation

We recommend a moderate overall decrease in the rates of retirement, as shown in Exhibit 7A.. We also recommend the following adjustments be made to the age-based retirement rates to reflect the impact of service.

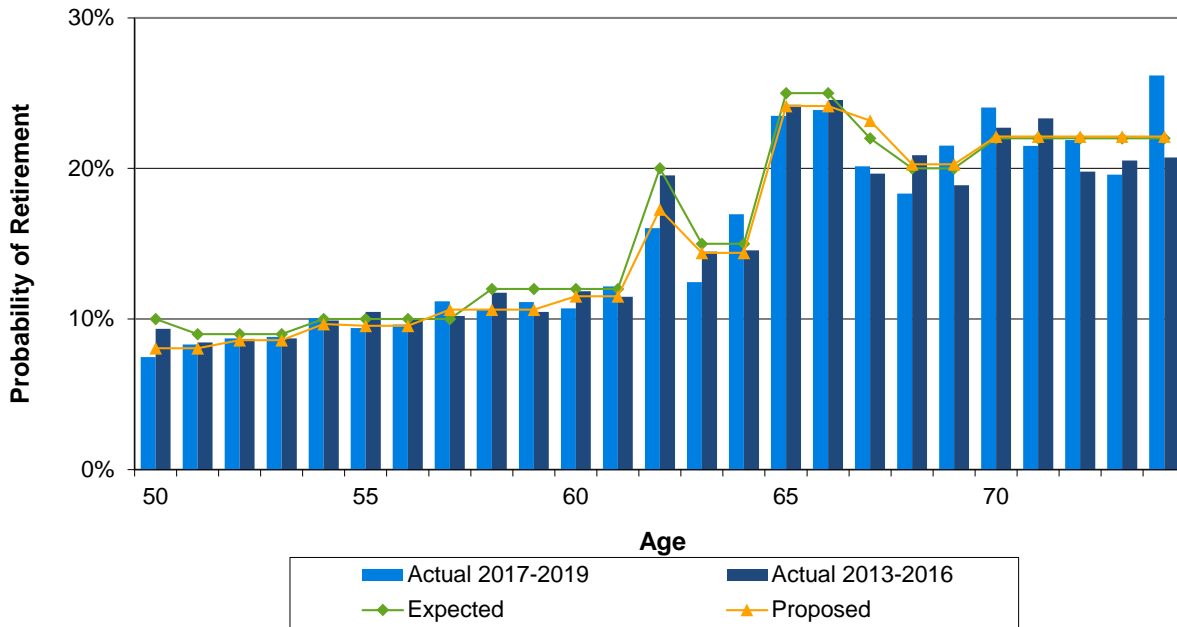
Years of Service	Age	
	Less than 65	65 or Older
Less than 15	75%	90%
15 to 24	90%	90%
25 to 29	110%	110%
30 & Up	125%	110%

The proposed service retirement rates are shown numerically in Appendix D

Estimated Impact on Required Contribution Rates

The recommended service retirement rate changes are expected to increase the aggregate average required contribution rate by 0.02%.

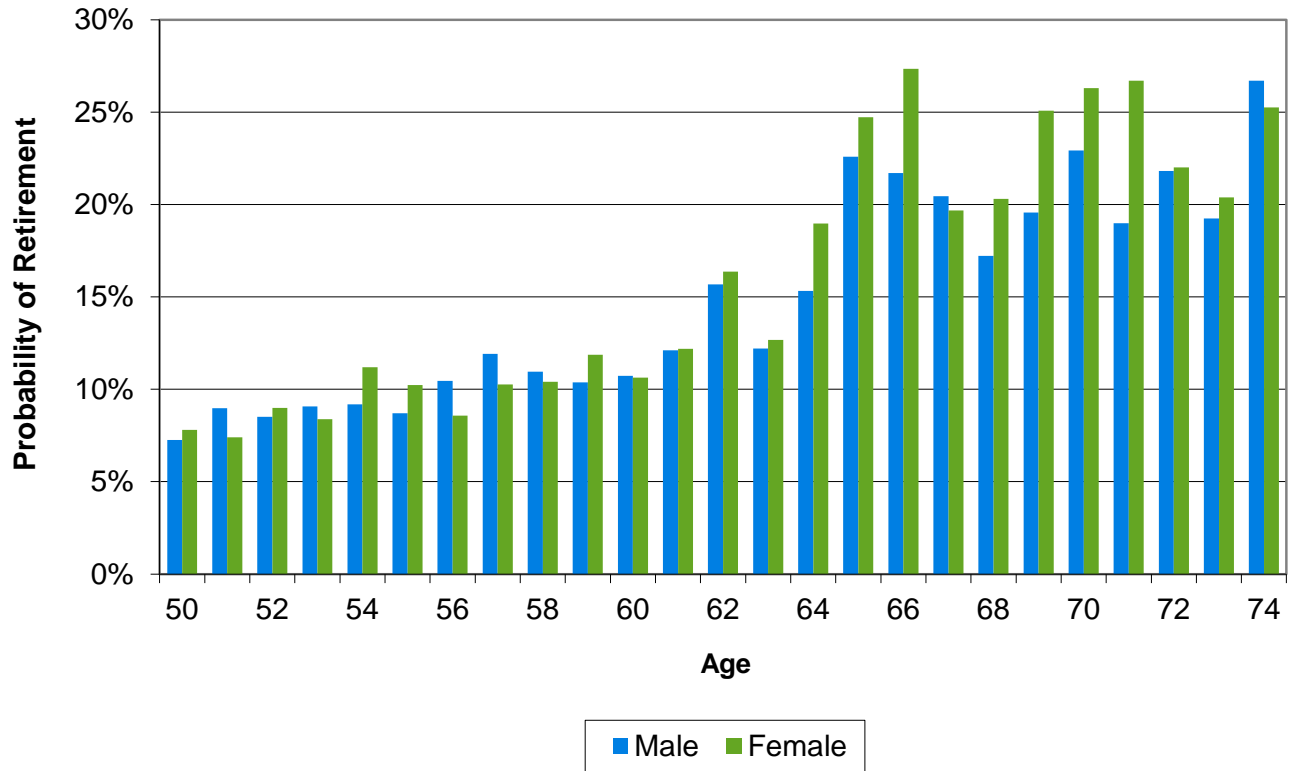
Exhibit 7A
Retirement Rates by Age (Combined Males and Females)



Retirement Summary ⁽¹⁾ by Age Group (Ages less than 75)					
	Actual	Expected	A/E	Proposed	A/P
Under 50	27,263	32,031	85%	27,013	101%
50-54	81,657	87,202	94%	80,538	101%
55-59	125,835	130,826	96%	123,480	102%
60-64	181,761	198,239	92%	184,889	98%
65-69	129,545	136,292	95%	135,238	96%
70-74	39,374	38,235	103%	38,444	102%
Total	585,436	622,825	94%	589,601	99%

1. Results are weighted by annual salary and reported in \$1,000's.

Exhibit 7B
Actual Retirement Rates by Age & Gender



Retirement Summary by Gender (Ages less than 75) ⁽¹⁾					
	Actual	Expected	A/E	Proposed	A/P
Male	327,266	348,167	94%	336,645	97%
Female	258,170	274,658	94%	252,956	102%
Total	585,436	622,825	94%	589,601	99%

1. Results are weighted by annual salary and reported in \$1,000's.

8. Disability Retirement

TCDRS allows a member to begin receiving benefits prior to eligibility for service retirement if they become disabled. There are two types of disability:

- **Non-Occupational Disability:** This is available to a disabled member only if the member has satisfied the vesting requirement.
- **Occupational Disability:** This is available only to members who are disabled in the performance of duty. There is no service requirement.

Results

Overall, we found there were fewer disabilities than expected with the current rates. This continues the trend from the prior investigation. The following is a comparison of the actual-to-expected disabilities for active members by type of disability for this study period. Note that the summary below only reflects members that went from active status in one year to disabled status in the following year. This is the majority of disability retirements that occur, but about a one-third of all disability retirements during the study period did not fall into this category. We believe this is primarily due to the lag between when a member leave active service and when a disability claim may be made and subsequently approved. For example, a member may leave active status in year 1, be a deferred inactive member in year 2 while waiting for approval, and then be a disability retirement in year 3 when the disability retirement is approved. Since about one-third of the disability retirements will not show up in our analysis, we would expect the actual-to-expected ratio would be about 67% if the current assumptions are accurately predicting the number of disability retirements.

Disability Summary ⁽¹⁾			
	Actual	Expected	A/E
Occupational ⁽²⁾	31	441	7%
Non-Occupational	3,631	6,404	57%
Total	3,662	6,845	53%

1. Results are weighted by annual salary and reported in \$1,000's.
2. For purposes of our analysis, Occupational disability refers to disabilities that occur before the member is vested. Non-Occupational disabilities are assumed to be all disabilities that occur after a member is vested.

Exhibits 8A show the results of the Non-Occupational disability study graphically. There was not statistically significant experience for Occupational disability to show in graph form. The rates are currently based on age only. Our findings are as follows:

- **Age:** Members at older ages tend to have a greater probability of becoming disabled than younger members.

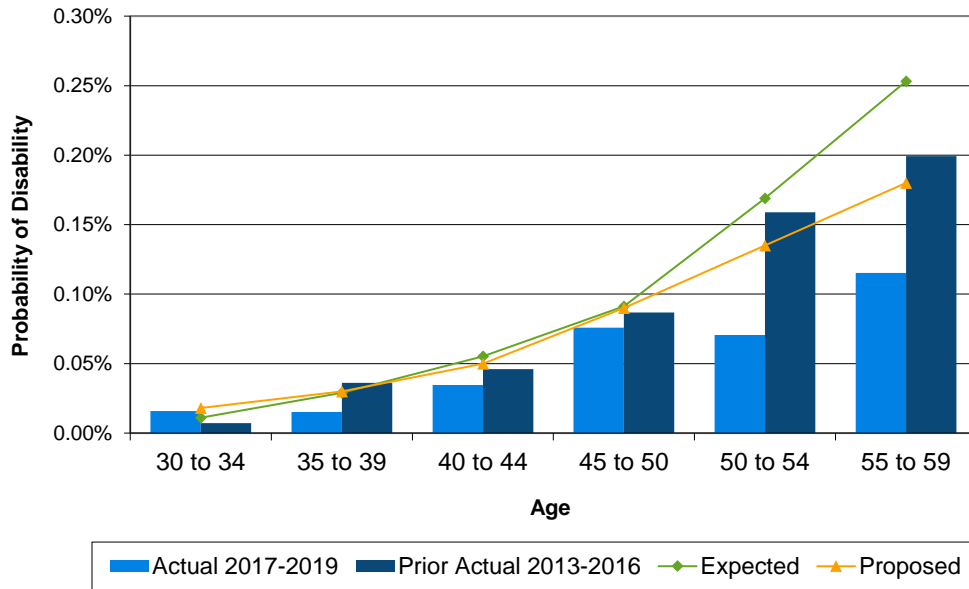
Recommendation

We recommend lowering the current rates for both occupational and non-occupational disability. The new recommended rates reflect reduced rates at most ages and are somewhat higher than the actual experience to approximately account for the additional disabilities not reflected in our analysis due to lag that sometimes occurs. As previously noted, Occupational disabilities are only assumed to occur prior to the member satisfy the vesting requirement and Non-Occupational disabilities only after meeting the vesting requirement.

Estimated Impact on Required Contribution Rates

The proposed disability retirement rate changes are expected to have no impact on the aggregate required contribution rate, and no employer is expected to have a change in the required rate of more than 0.01%.

Exhibit 8A Non-Occupational Disability Rates by Age



Disability Summary ⁽¹⁾					
	Actual	Expected	A/E	Proposed	A/P
Occupational ⁽²⁾	31	441	7%	77	40%
Non-Occupational	3,631	6,404	57%	5,463	66%
Total	3,662	6,845	53%	5,540	66%

1. Results are weighted by annual salary and reported in \$1,000's.
2. For purposes of our analysis, Occupational disability refers to disabilities that occur before the member is vested. Non-Occupational disabilities are assumed to be all disabilities that occur after a member is vested.

9. Termination from Active Employment

This section of the report summarizes the results of our study of terminations of employment for reasons other than death, service retirement, or disability. Under the current method, a member who terminates active employment, but does not retire, is assumed to either take a refund or leave the contributions with TCDRS. We will refer to the combination of the two rates as the aggregate termination rate.

We are recommending increases in the termination rates for most service levels. We are also recommending some adjustments to several specific employers based on actual experience over multiple study periods and changes in the employer’s number of contributing members.

Results – Aggregate Terminations

Looking at total terminations, we found there were somewhat more than the current rates projected and significantly more for active members with at least five years of service. The following is a comparison of the actual-to-expected terminations for active members by service for this study period. It is displayed graphically in Exhibit 9A.

Termination Summary by Service (Less than 30 years) ⁽¹⁾			
Service	Actual	Expected	A/E
1-4 years	833,877	700,943	119%
5-9 years	314,176	238,330	132%
10-14 years	163,143	107,485	152%
15-19 years	73,665	41,081	179%
20-24 years	21,045	9,785	215%
25-29 years	1,689	1,153	147%
Total >= 1 Yr	1,407,595	1,098,777	128%

1. Results are weighted by annual salary and reported in \$1,000's.

As noted above, we have weighted the results by salary to account for the influence salary levels have on termination rates. Specifically, lower-paid employees tend to have higher rates of termination.

Termination rates are currently based on five factors. We studied each of these factors to see if they were significant, and if so, what the impact was. Our findings are as follows:

- **Service:** Members in the early stages of their careers have a higher probability of terminating. In other studies, we have found years of service to have the most significant impact on termination. We found this to be true with TCDRS.
- **Gender:** The current rates assume that females are more likely to terminate employment than males. Although there were some differences by gender, the differences were relatively small and varied by years of service, with females having higher observed rates at some levels of service and males at others. Given the relatively small difference, we are recommending no longer differentiating between males and females in the termination rate assumptions. See Exhibit 9B for details.
- **Entry Age:** Members with younger entry ages tend to be more likely to terminate than older members with the same years of service. As shown in Exhibit 9A, members at younger entry ages were more likely to terminate during this study period, so our recommended rates continue to reflect the impact of entry age.
- **Partial Lump-Sum Option (PLSO):** Currently, members of employers who have elected the PLSO are assumed to be less likely to withdraw. This is done by setting the termination rates to zero for the two years prior to retirement eligibility, which effectively results in no assumed refunds during that period. It is our opinion that the PLSO will have an impact on whether members elect a refund, and we recommend continuing the current assumption by setting the probability of termination to zero for the two years prior to

service retirement eligibility. Our reasoning is that a member is unlikely to refund if the member only has to wait a year or two to receive a lump sum of his or her contributions as well as an annuity benefit.

- **Employer:** Currently, members are assumed to have different probabilities of termination depending on which employer they work for. Each employer is analyzed and assigned a termination group based on its size and experience. This grouping determines whether the employer's members have a higher or lower probability of termination relative to TCDRS average experience, or no adjustment in some cases. We believe that employers have unique characteristics with respect to rates of termination. For example, hospitals tend to have high turnover rates relative to traditional public agencies.

Recommendation

As discussed earlier, we recommend changes to the base termination rates. The aggregate rates for the entire system are shown in Exhibit 9C. These expected and proposed rates are blended averages of the base termination rates which vary by entry age.

A complete numerical listing of the proposed termination rates is shown in Appendix D.

Recommendation – Termination Groups

As discussed earlier, individual employers are assumed to have different characteristics when it comes to the probability of termination. They are currently divided into seven groups, with each employer being assigned to one of these assumption groups. The seven groups are:

- Zero Termination (for very small employers only)
- Extra-Low Termination
- Low Termination
- Middle-Low Termination
- Middle Termination
- Middle-High Termination
- High Termination

We recommend the assignment of new termination groups for some employers based on actual experience and changes in the number of contributing members. For example, employers who join TCDRS with five employees or less are generally assigned a zero termination group. If that employer has added to its workforce and now has more than 10 employees, we have recommended using an extra-low termination group instead of a zero termination group. The proposed changes would lower the termination groups (i.e., decrease the probability of termination) for 22 employers and raise the termination group for 123 employers. A complete list of the termination groups is shown in Appendix C.

Estimated Impact on Required Contribution Rates

We recommend changes to the aggregate rates of termination which will result in decreases in the required contribution rates for almost all employers. The financial impact by employer is shown in Appendix B. Note this also includes the proposed adjustments to the termination group for some employers and the projected impact of the proposed change in rates of refund discussed in the next section. There is projected to be a 0.50% decrease in the aggregate required employer contribution rate due to the proposed changes in termination and refund rates.

Exhibit 9A
Actual Termination by Entry Age Group

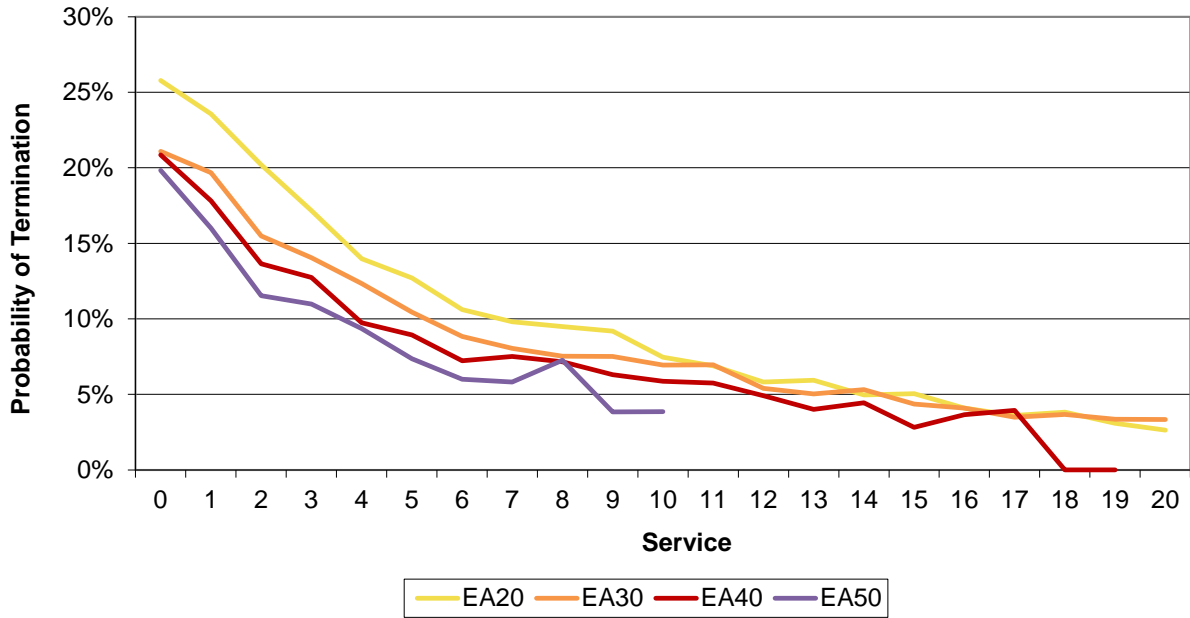


Exhibit 9B
Actual Termination by Gender

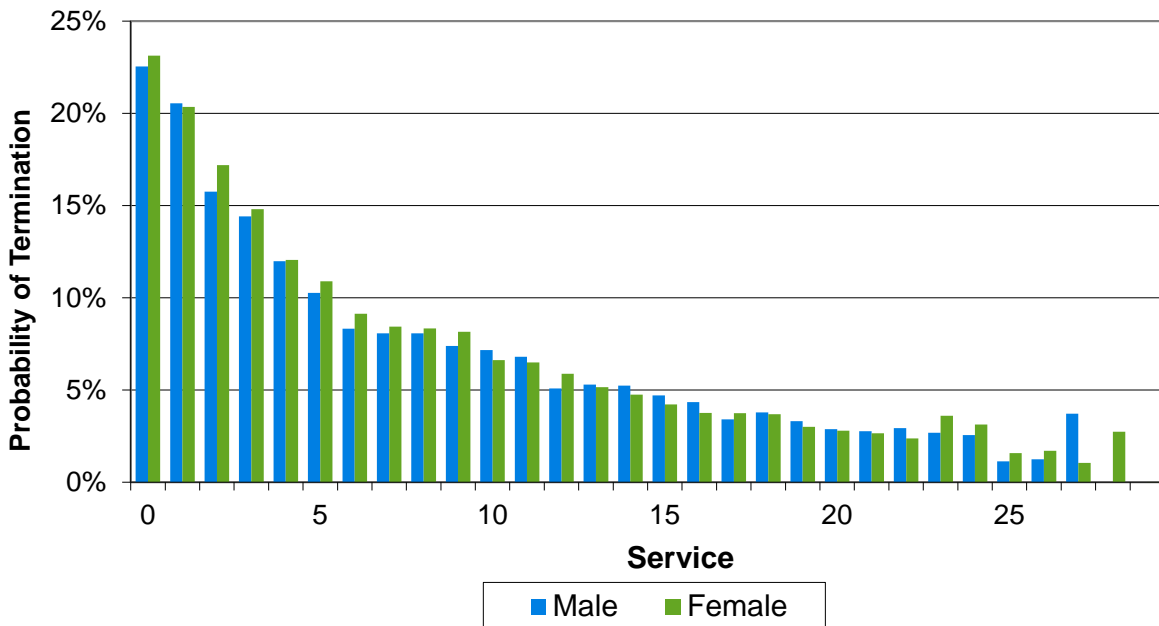
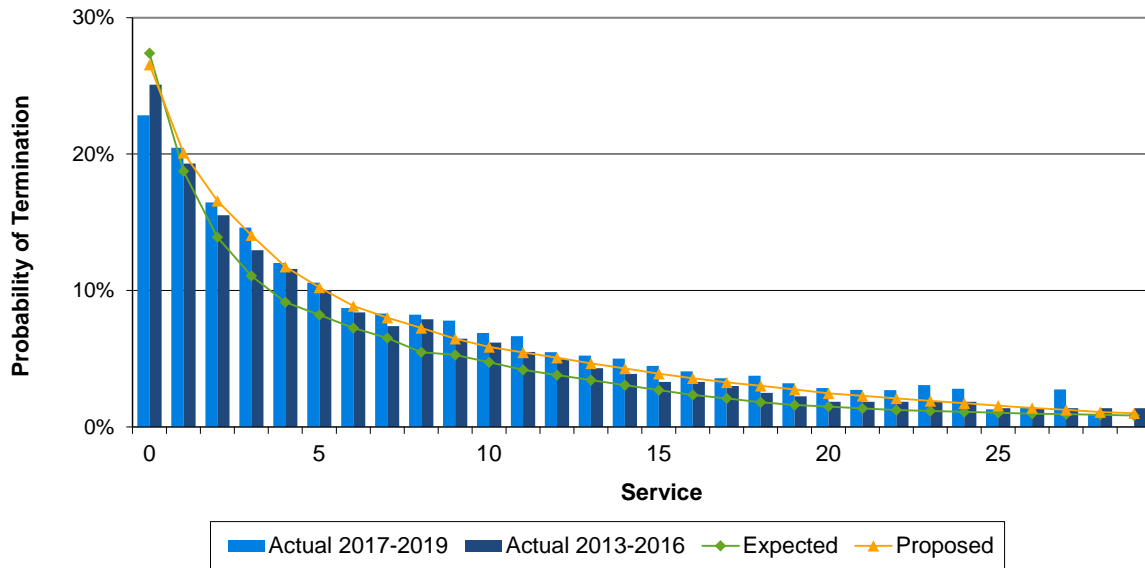


Exhibit 9C Aggregate Termination Rates



Termination Summary by Service (Less than 30 years) ⁽¹⁾					
Service	Actual	Expected	A/E	Proposed	A/P
0 years	176,093	211,217	83%	204,793	86%
1 year	307,949	282,281	109%	302,362	102%
2 years	222,780	188,324	118%	224,420	99%
3 years	174,045	132,017	132%	167,635	104%
4 years	129,103	98,321	131%	126,109	102%
5-9 years	314,176	238,330	132%	296,694	106%
10-14 years	163,143	107,485	152%	140,968	116%
15-19 years	73,665	41,081	179%	63,989	115%
20-24 years	21,045	9,785	215%	16,203	130%
25-29 years	1,689	1,153	147%	1,679	101%
Total >= 1 Yr	1,407,595	1,098,777	128%	1,340,059	105%

1. Results are weighted by annual salary and reported in \$1,000's.

10. Status of Terminated Vested Accounts (Probability of Refund)

The probability of refund is the likelihood members who terminate will withdraw their accounts from TCDRS. Additional discussion of the timing of when the member elects to take the refund is discussed in Section 12.

We found that the actual refunds were less than expected based on the current rates. This continues a trend of declining elections of refunds that has been observed in the past few studies. The following is a comparison of the actual-to-expected refunds for active members by vesting requirement for this study period.

Results

Probability of Refund Summary ⁽¹⁾			
Vest Yrs.	Actual	Expected	A/E
5 Years	7,391	10,298	72%
8 Years	85,549	128,992	66%
10 Years	9,187	13,061	70%
Total	102,127	152,350	67%

1. Results are weighted by annual salary and reported in \$1,000's. Actual values have been increased by 10% to reflect refunds expected to occur after termination as discussed below.

These results are weighted by annual salary (\$1,000s). That is, in total, members with annual salaries totaling about \$152 million were expected to terminate and take a refund during the study period and the actual number was closer to \$102 million. Note that only members who have satisfied the service requirement for retirement at age 60 are included in this study. If a member terminates prior to satisfying this vesting requirement, there is a 100% assumed probability the member will elect a refund.

Exhibits 10A and 10B show the results of the study graphically. The rates are currently based on two factors. We studied each of these factors to see if they were significant, and, if so, what the impact was. Our findings are as follows:

- **Service:** In other studies we have found that the more service the member has, the more likely the member is to keep his or her account in the System. We found this to be true with TCDRS.
As previously discussed, we have assumed that any member who terminates with less than required service for retirement is assumed to take a refund, since they are not eligible for an employer-provided retirement benefit.
- **Vesting Requirement:** The probabilities of refund are the same for the three vesting requirements (5, 8, and 10 years), except in years prior to meeting the vesting requirement where a 100% probability of refund is assumed. Although, there was some variation by vesting requirement at individual service levels, overall there did not appear to be a significant difference. Note that 5- and 10-year vesting groups are much smaller and therefore tend to have more variation.

Recommendation

We recommend reducing the probability of refund assumptions as shown in Exhibit 10A.

The proposed rates are shown numerically in Appendix D. Note that there is often some delay between when a member terminates and when he elects to take a refund. Therefore, the actual number of refunds may eventually be somewhat greater, as members who terminated during the study period may elect a refund later but will not show up as a refunded account in this study. We have increased the actual values calculated in our study by 10% to provide a rough estimate of this impact.

Estimated Impact on Required Contribution Rates

The projected financial impact is combined with the proposed termination rates and is discussed at the end of the prior section.

Exhibit 10A Probability of Refund

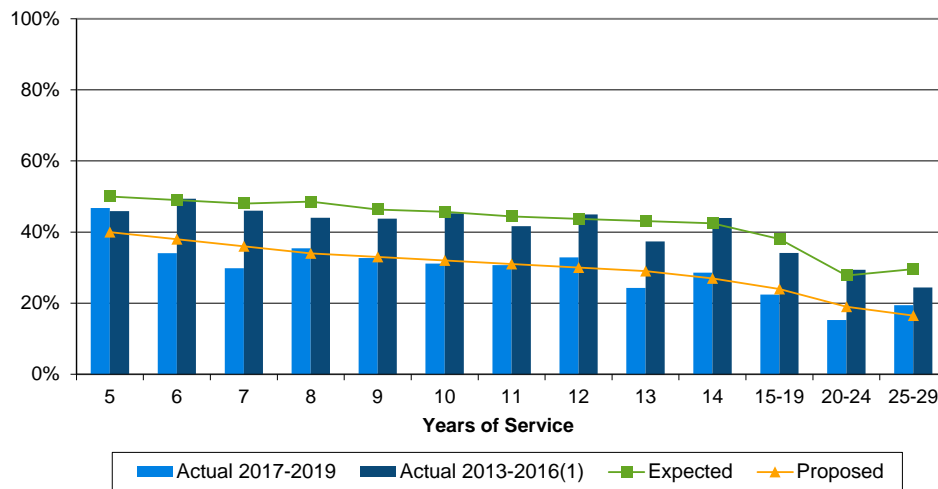
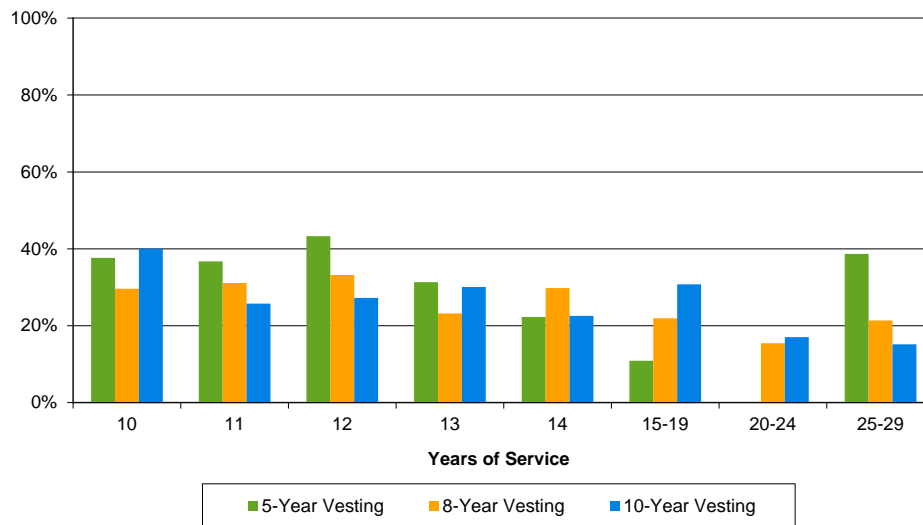


Exhibit 10B Probability of Refund (by Vesting Requirement)



Probability of Refund ⁽²⁾ Summary (By Vesting Requirement)					
Vest Yrs.	Actual	Expected	A/E	Proposed	A/P
5 Years	7,391	10,298	72%	7,551	98%
8 Years	85,549	128,992	66%	87,690	98%
10 Years	9,187	13,061	70%	8,778	105%
Total	102,127	152,350	67%	104,019	98%

1. Prior study results are on a headcount-weighted basis. Current study results are salary weighted and reported in \$1,000s.
2. Results shown in the table include only those who have met the service eligibility requirement for retirement at age 60. Actual values have been increased by 10% to reflect refunds expected to occur after termination.

11. Postemployment Mortality used in the Valuation

We studied rates of mortality for members and beneficiaries receiving monthly benefits. These rates are used in the valuation for service retirees, disability retirees, beneficiaries and members with inactive accounts. We reviewed all four years of the study, but excluded mortality experience for 2020 as the rates of death were about 20% higher in 2020. This spike in rates was likely significantly impacted by COVID-19, and we do not currently believe it represents long-term expectations for the future.

We are recommending changes to the base mortality tables to reflect the most recent study completed by the Society of Actuaries which is based on mortality experience specific to public plans. We are also recommending an update to the projection scale that reflects expected future improvements in mortality.

Results

Overall, we found there were somewhat fewer deaths (as measured by the monthly benefit amounts of the deceased retirees) than were expected by the current rates. Note that this study has been performed based on the monthly benefits for members who die during the period, instead of just looking at the counts of deceased members. We believe this benefit-weighted approach is a better predictor of liabilities.

The following is a comparison of the actual-to-expected deaths, measured by the accumulated monthly benefits of those retirees and beneficiaries who died during the period, by gender and type of retirement for this study period.

Monthly Benefits No Longer Payable due to Death ⁽¹⁾				
Gender	Type	Actual	Expected	A/E
Male	Service	\$ 3,868	\$ 4,055	95%
Female	Service	2,094	2,262	93%
Male	Beneficiary	153	118	130%
Female	Beneficiary	763	663	115%
Male	Disability	90	61	148%
Female	Disability	58	37	157%
Total		\$ 7,026	\$ 7,196	98%

1. Results reported in \$1,000's.

Exhibits 11A through 11F show the results of the study graphically. The rates are currently based on three factors. We studied each of these factors to see if they were significant, and, if so, what the impact was. Our findings are as follows:

- **Age:** Members at older ages tend to have a greater probability of dying than younger members.
- **Gender:** Male members tend to have a greater probability of dying than females. This trend is generally true for mortality studies, and we found this to be true with TCDRS.
- **Retirement Type:** Service retirees live longer than disability retirees. This trend is generally true for mortality studies, and we found this to be true with TCDRS. Beneficiaries tend to have higher mortality rates than service retirees. See additional discussion following.

Recommendation

We recommend changes to the mortality assumptions for service retirees, disabled retirees, and beneficiaries. The current rates have an actual-to-expected ratio of 98% in aggregate for all groups. Although this is an acceptable match in total, we are recommending revisions to more recent public plan specific mortality tables. These new tables provide a better overall fit, primarily for the female service retiree group.

For beneficiaries, we are recommending using the same mortality assumptions as service retirees. Although we separately studied mortality experience among beneficiaries and found somewhat higher mortality rates than observed among service retirees, our study was limited only to beneficiaries currently receiving payments, as data on beneficiaries where the member, not the beneficiary, is currently receiving the payment tends to be less reliable. This higher rate of mortality among beneficiaries, at least those who are surviving widow(er)s, is consistent with what other studies have shown. This higher rate is particularly prevalent immediately following the spouse's death.

For beneficiaries where the member is still receiving payments, we believe their mortality will be at least as good, if not better than, the general service retiree population. Studies have shown that married individuals have longer life expectancies (i.e., lower mortality) than the general population. The beneficiaries not yet in payment are, for the most part, spouses of the member; therefore, we would expect this group to have lower mortality than the general service retiree group who may or may not be married.

Since our goal is to set an assumption for the total beneficiary population, we are recommending using the same mortality assumptions for beneficiaries as service retirees.

Additionally, as part of these revisions, we recommend using the most recent mortality tables published by the Society of Actuaries. The recommended tables are the "Pub-2010" family of static base mortality tables with adjustments to reflect actual TCDRS experience. These are the first standard tables based solely on public sector experience, and we feel they are appropriate for use as TCDRS's base mortality tables. Note that the 2010 in the title refers to the central year of collected study data, and the tables were actually released in 2019, as compared to the RP-2014 tables the current assumptions are based on which were released in 2014 and were not specific to public sector experience.

The recommended mortality rates are based on the applicable standard (Pub-2010) mortality tables with adjustments as follows:

Recommended Base Mortality Tables		
Male	Service Retiree	135% of Pub-2010 General Retirees Amount-Weighted
Female	Service Retiree	120% of Pub-2010 General Retirees Amount-Weighted
Male	Disabled Retiree	160% of Pub-2010 General Disabled Retirees Amount-Weighted
Female	Disabled Retiree	125% of Pub-2010 General Disabled Retirees Amount-Weighted
Male	Beneficiary	Same as Male Service Retiree
Female	Beneficiary	Same as Female Service Retiree

For the proposed service retiree and disabled retiree tables, the tables were updated to the Pub-2010 base table and adjusted to reflect actual experience. We believe there is sufficient service retiree mortality experience to recommend these adjustments to the standard mortality tables that set the proposed mortality rates close to the observed mortality rates. As previously noted, for beneficiary mortality we have proposed an assumption that is reflective of mortality for the entire beneficiary group, but the experience studied is only for in-payment beneficiaries who tend to have higher actual mortality rates. Therefore the proposed assumptions that result in actual-to-proposed ratios of greater than 100% in consistent with our analysis.

Although there was significantly less experience to analyze for disabled retirees than service retirees, we still felt it was at least partially credible. In recommending the proposed disabled mortality assumptions, we adjusted the standard tables only part of the way to the observed experience to reflect the limited experience available for disabled mortality. This is reflected in the actual-to-proposed ratios of greater than 100%.

Monthly Benefits No Longer Payable due to Death ⁽¹⁾				
Gender	Type	Actual	Proposed	A/P
Male	Service	\$ 3,868	\$ 3,917	99%
Female	Service	2,094	2,150	97%
Male	Beneficiary	153	118	130%
Female	Beneficiary	763	681	112%
Male	Disability	90	66	136%
Female	Disability	58	41	141%
Total		\$ 7,026	\$ 6,973	101%

1. Results reported in \$1,000's.

Overall, the proposed changes increase life expectancies of service retirees and result in a small increase or decrease in the required contribution rates for most employers, as discussed later in this section.

The following table shows there is a very little change in the life expectancy under the proposed tables.

Future Life Expectancy for 60-Year Old Retiring in 2021			
	Current	Proposed	Change
Male Service Retiree	23.5 years	23.7 years	+0.2 years
Female Service Retiree	27.4 years	27.5 years	+0.1 years

Mortality Improvement Projection Scale

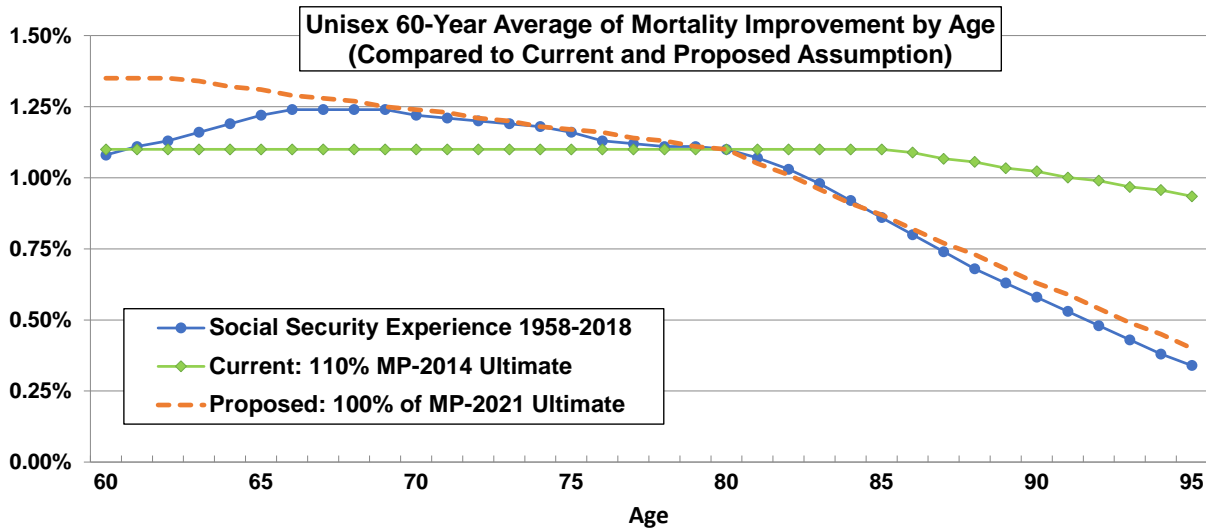
Note that the recommended mortality tables described above are referred to as “base” tables. They approximate current rates of mortality. They do not account for improvements (i.e., decreases) in mortality that may occur in the future. Based on historical trends, it seems highly probable that mortality rates will continue to decline. In other words, we expect people to live longer in the future.

Our current mortality assumption includes annual improvements in mortality based on 110% of the MP-2014 Ultimate Projection Scale to reflect the expected mortality improvement. We are recommending a change to reflect more recent forecasts.

There is a strong consensus in the actuarial community that future improvements in mortality should be reflected in the valuation assumptions. There is less consensus, however, about magnitude and approach to reflecting mortality improvement. The most recent projection scale published by the Society of Actuaries (SOA) incorporates a complex two-dimensional matrix of rates of improvement that vary by age, gender, and year. Ultimately, the projection scale (Scale MP-2021) goes to an annual improvement that varies by age, but not gender or year, in years 2037 and later. We refer to these rates as the ultimate rates. Note that projected improvement prior to year 2037 is less.

Our recommendation is to update the mortality improvement scale to reflect these updated projections. We believe 100% of the ultimate portion of the MP-2021 scale reflects a reasonable long-term forecast for mortality improvement and is consistent with historical trends.

We have compared the recommended projection scale with actual mortality improvement from the most recent 60 years of experience of the US Social Security system and found them (blue and orange lines) to be reasonably consistent as shown in the following graph.



Estimated Impact on Required Contribution Rates

Overall, the estimated combined impact of the proposed active and postemployment mortality assumptions (including the update to the mortality improvement scale) on the aggregate required contribution rates is a 0.09% decrease.

Exhibit 11A Service Retiree Mortality for Males

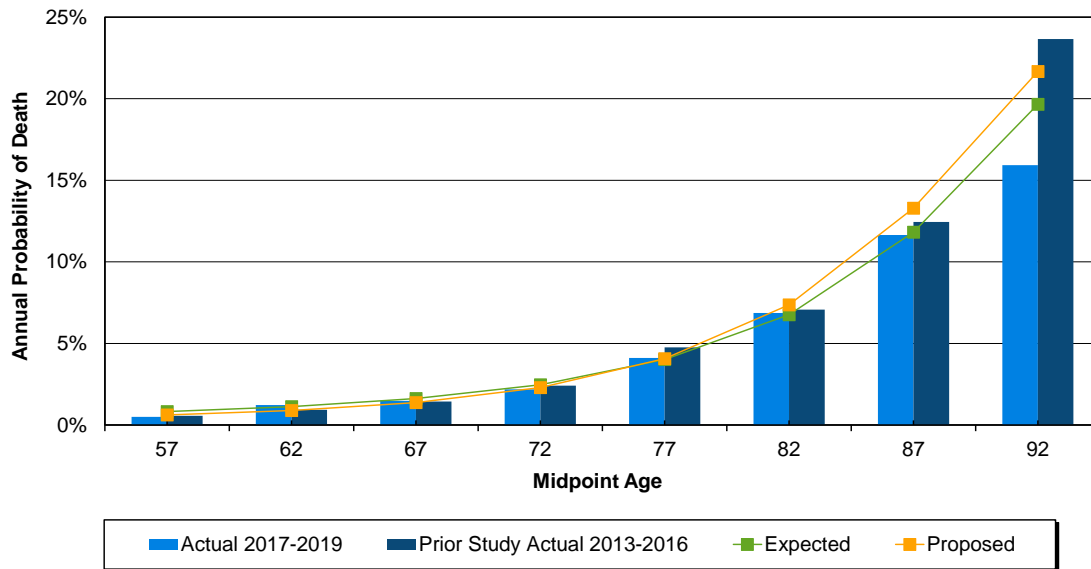
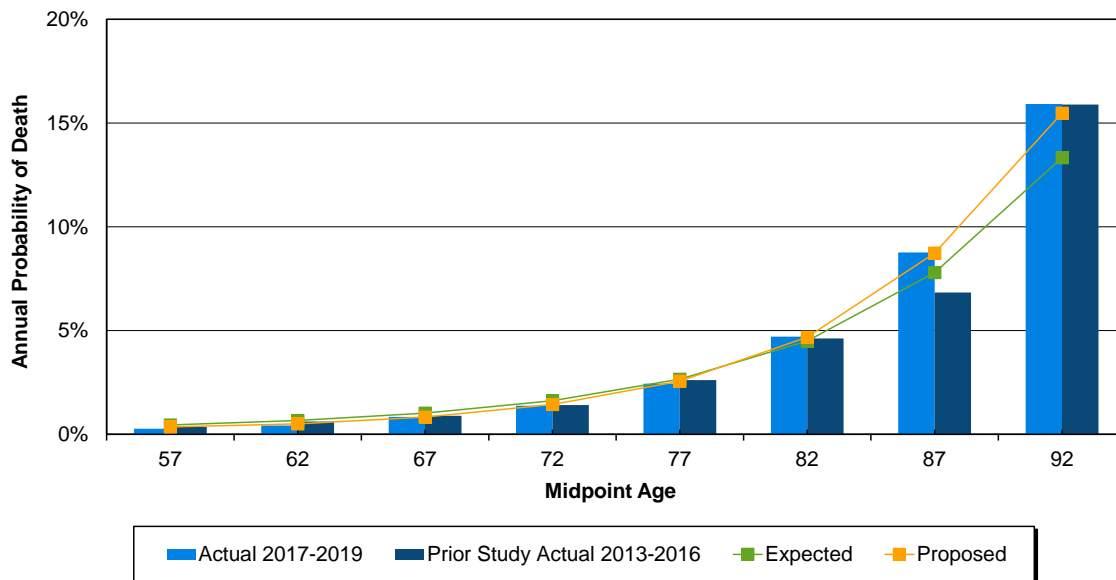


Exhibit 11B Service Retiree Mortality for Females



Monthly Benefits (in \$1,000s) No Longer Payable due to Death						
Gender	Type	Actual	Expected	A/E	Proposed	A/P
Male	Service	\$ 3,868	\$ 4,055	95%	\$ 3,917	99%
Female	Service	2,094	2,262	93%	2,150	97%
Total		\$ 5,962	\$ 6,317	94%	\$ 6,067	98%

Exhibit 11C Disability Retiree Mortality for Males

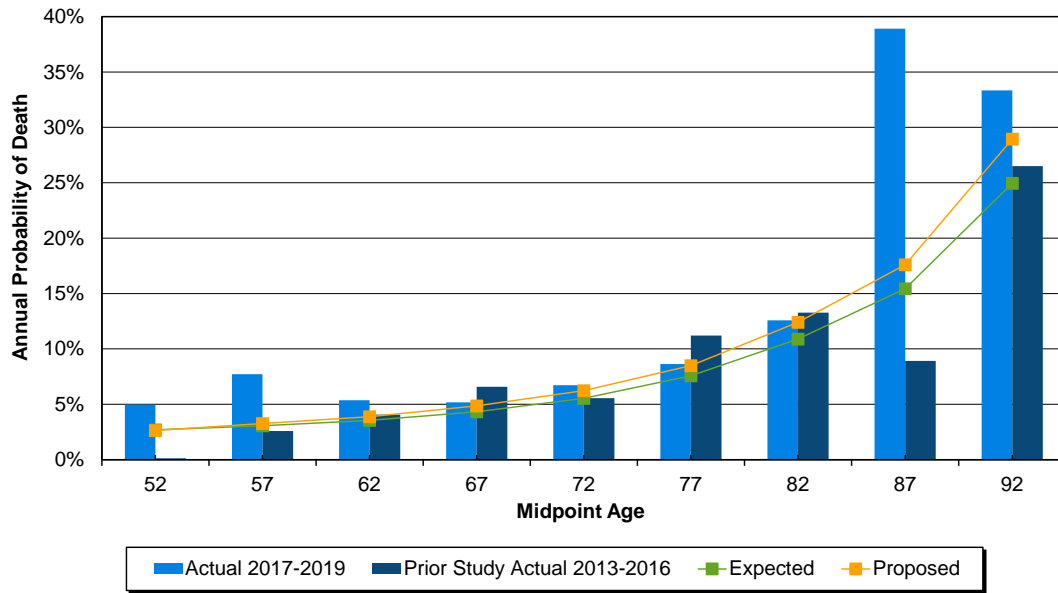
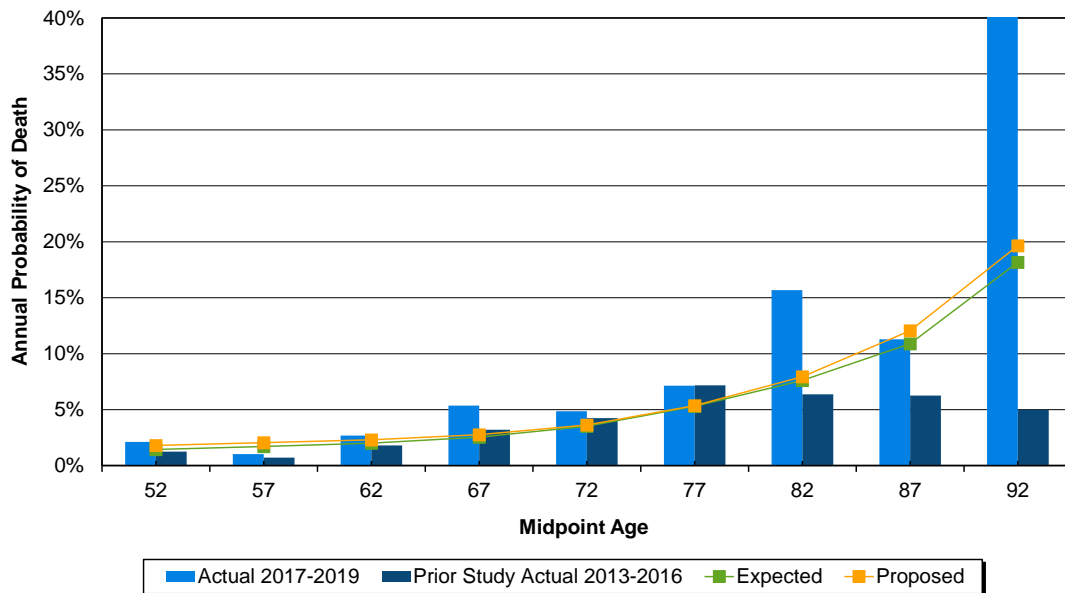


Exhibit 11D Disability Retiree Mortality for Females



Monthly Benefits (in \$1,000s) No Longer Payable due to Death						
Gender	Type	Actual	Expected	A/E	Proposed	A/P
Male	Disability	\$ 90	\$ 61	148%	\$ 66	136%
Female	Disability	58	37	157%	41	141%
Total		\$ 148	\$ 98	151%	\$ 107	138%

Exhibit 11E
Beneficiary Mortality for Males

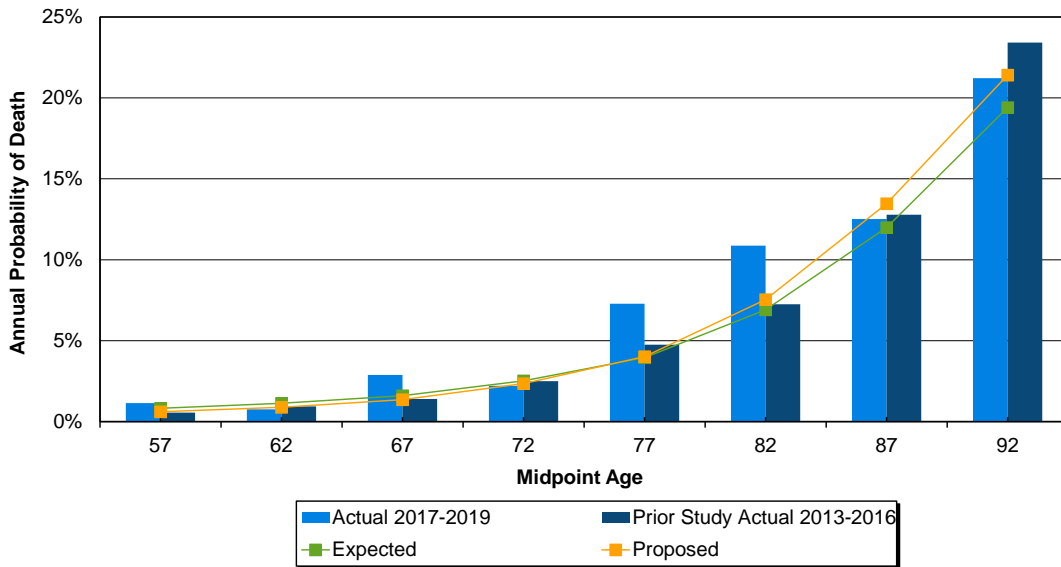
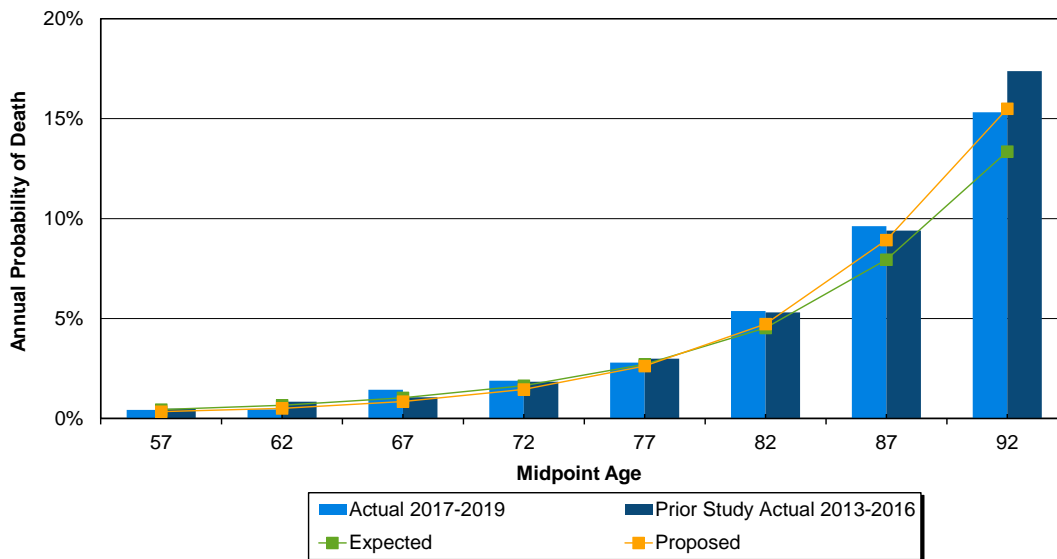


Exhibit 11F
Beneficiary Mortality for Females



Monthly Benefits (in \$1,000s) No Longer Payable due to Death						
Gender	Type	Actual	Expected	A/E	Proposed	A/P
Male	Beneficiary	\$ 153	\$ 118	130%	\$ 118	130%
Female	Beneficiary	763	663	115%	681	112%
Total		\$ 916	\$ 781	117%	\$ 799	115%

12. Miscellaneous Assumptions

In addition to the assumptions described in the previous sections, there are a number of other assumptions that are needed to complete the actuarial valuation. In this section, we discuss these assumptions along with any recommended changes.

Group Term Life (GTL)

In Section 11, we discussed the mortality rates used for valuation purposes. For the GTL, the current assumptions are the same as the regular valuation assumptions. We believe this continues to be a reasonable assumption, and we are recommending the new valuation mortality assumptions be adopted for use in the calculation of the GTL contribution rates; however, we are proposing one adjustment to the current method.

Currently, there is a large surplus in the GTL Fund, more than can reasonably expect to be needed in the future. This surplus receives a guaranteed 7% interest credit each year, so it is expected to grow each year. Given the size of the surplus, we believe it would be reasonable to include some recognition of the surplus in the calculation of the GTL contribution rates. Our recommendation is to apply a 20% discount on the GTL contribution rates that are calculated based on the true actuarial cost. That is, the GTL contribution rates would be calculated as before, but then the result would be multiplied by 80%. We estimate a 60% discount could be applied, and the surplus in the GTL Fund would be projected to remain about the same, so an argument could be made for a larger discount; however, if too large of a discount is applied, it might cause a large portion of the employers to join (currently only a small portion of the population participates in the GTL). A large increase in participation combined with a significant understatement of the true cost could cause a depletion of the surplus.

Benefit Option Election for Vested Survivor Annuity Death Benefit (SADB)

When an eligible active member dies, the beneficiary has the option of either electing a refund of the member's contributions or selecting a monthly benefit. An eligible member is generally one who has four or more years of credited service. There is no marriage requirement for the beneficiary to receive the benefit. For the valuation, the current assumption is that beneficiaries will select the annuity benefit 100% of the time.

Although there will be some cases where an eligible beneficiary elects a refund of contributions instead of the more valuable annuity benefit, this assumption will not materially impact the valuation. We recommend no change in the assumption that 100% of all beneficiaries of active member deaths are assumed to elect the annuity benefit.

Option Elected at Retirement

Future retired members are assumed to elect the standard retirement option with a monthly benefit for the retiree's lifetime only. Current retirees and beneficiaries are valued based on the option previously selected. The standard option includes a refund of the remaining member contributions if the member dies before receiving monthly benefits equal to their contributions at retirement. This cash refund is approximated in the valuation with a 3-year certain period. We recommend a change to a 4-year certain period to reflect the new post-2017 annuity purchase rates which result in a longer period before the monthly benefits paid are expected to exceed the member contributions at retirement.

Retirement Commencement for Deferred Members

Deferred vested inactive members are currently assumed to retire (100% probability) at the later of age 60 and their earliest retirement eligibility. We reviewed actual experience of inactive member retirements during the study period and found retirement patterns for deferred inactive members were generally similar to patterns for active

members after age 60. In aggregate, applying the active member service retirement assumptions (without service-adjustment) results in a very similar actual to expected number of retirements. We therefore recommend applying the same service retirement assumptions to deferred vested inactive members as applied to active members (without the service-adjustment).

Adjustments for Plans with the Partial-Lump Sum Payment Option

About one-fifth of TCDRS employers provide the Partial Lump-Sum Payment at Retirement Option (PLSO). Members of these plans may choose to take an immediate lump-sum payment at retirement of all or a portion of their account. If the member takes the partial lump sum, he or she is still eligible to receive a monthly benefit. The monthly benefit is actuarially reduced to account for the lump sum.

The actuarial reduction in the annuity benefit if a member elects a lump sum is based on an interest rate of 7.0%, as defined in the TCDRS Act, and specified mortality tables. However, the valuation assumes future retirements are paid as a life-only benefit using the valuation assumption of 7.5%. In addition, the mortality rates used in the actuarial equivalent determination differ from those used in the valuation. This difference in interest and mortality rates results in benefits paid as lump sums having a slightly higher actuarial value than benefits paid as monthly annuities. Although this varies by individual, in total this would cause an actuarial loss, so the valuation includes an adjustment to be added to account for this impact. Based on our analysis, we found that the election of a refund under the PLSO was 3.6% more valuable than the monthly annuity based on the actuarial assumptions. The actual adjustment is less because most members do not elect the PLSO, so no adjustment is needed.

We looked at all retirements during the study where the employer had elected the PLSO option. Of the member Employee Savings Fund (ESF) accounts eligible to be paid as a lump sum, the members chose to receive 18% of the total dollars as a lump sum. The remainder was converted to an annuity and paid as a monthly benefit. If future retirees from the PLSO employers take 18% of the benefit related to their account as a lump sum and 82% as a monthly annuity, this is approximately 0.7% more valuable than if the whole ESF-related benefit was paid as a monthly benefit. This compares to the current assumption of 0.75%. Therefore, we recommend retaining the current assumption of a 0.75% increase to the monthly benefit attributable to member deposits for employers who have elected the PLSO. Note that this only affects the valuation; it does not impact the actual benefit received by the member.

Refund of Contributions Election Timing

All members who terminate employment prior to satisfying their employers' vesting requirement, and a portion of members who terminate employment that have satisfied the vesting requirement but are not yet eligible to retire, are assumed to receive a refund of their account balance in lieu of a monthly lifetime benefit. The current assumption is that these members receive the refund immediately upon termination of employment. Additionally, the current assumption is that all former employees who have not met their employers' vesting requirement and still have contributions on deposit will immediately receive a refund of their account balance on the first date following the valuation date.

We reviewed the actual experience of these members and found that a significant portion of these members do not immediately elect a refund of their account balance upon termination, or on the first day following the valuation date.

For former employees only eligible for a refund of their account balance, we recommend a change in the assumption such that there is a 10% assumption of the former employee electing a refund of their account balance in each of the ten years following the valuation date. That is, the account balance is assumed to be distributed within ten years of the valuation date.

For current active members who will receive a refund of their account balance, we recommend a change in the assumption such that 50% of those members elect a refund of their account balance immediately upon termination, and the remaining 50% elect a refund at a rate of 10% in each of the ten years following the valuation date.

Current deferred vested inactive members are assumed to keep their accounts with TCDRS until their assumed retirement.

A significant benefit of this change is that expected cashflows of TCDRS will more accurately reflect anticipated experience.

Default Values

Assumptions must be made where data is missing. The current and proposed assumptions are as follows:

- **Age:** The current assumption is that all records where the birth date is missing are age 34 plus the member's earned years of service plus the elapsed time since date of last deposit. We recommend no change to this assumption.
- **Gender:** The current assumption is that 50% of all records where the gender code is missing are male and 50% are female. The current TCDRS active population is fairly evenly distributed between males and females. We randomly assign a gender code to each member with a missing code in the first year the record is received so that approximately 50% of all blank values are set as male and 50% as female. Once set for an individual member the default value is retained unless a valid value is subsequently provided. We recommend no change to this assumption or method.

Beneficiary Age Difference

For purposes of calculating the survivor benefit for current contributing and non-contributing members, male members are assumed to have a female beneficiary who is three years younger. Female members are assumed to have a male beneficiary who is three years older. Since the survivor benefit is calculated on actuarial equivalent basis, this assumption should not have a material effect on the valuation. We recommend no change to the assumption of a three-year age difference between the member and beneficiary.

Future Cost-of-Living Adjustments

The TCDRS Act does not permit automatic Cost of Living Adjustments (COLAs) for postretirement benefits. However, ad hoc COLAs are permitted. For funding valuation purposes, no future COLAs are assumed. For financial reporting under GASB 68, future CPI COLAs are based on prior COLAs adopted and the assumed price inflation if the employer is determined to have a substantively automatic COLA. We recommend no change to the COLA assumptions.

Estimated Impact on Required Contribution Rates

Overall, the estimated impact on the required contribution rates of the proposed miscellaneous assumptions is as follows:

- The proposed change to the retirement commencement ages of deferred inactive members is expected to decrease the aggregate required employer contribution rate by 0.02% of pay.
- The proposed change to the refund of contribution timing assumption is expected to decrease the aggregate required contribution rate by 0.03% of pay.
- The proposed change to the option elected at retirement assumption is expected to increase the aggregate required employer contribution rate by 0.09% of pay.

Appendix A Increase in Payroll from 2016 to 2019

No.	Employer Name	Monthly Payroll		Annual Growth				Expected 2016-19 Growth	Actual Growth More/(Less) Than Expected	Proposed Assumption
		12/31/2016	12/31/2019	2004-08	2008-12	2012-16	2016-19			
638	Acton MUD	103,177	103,310	7.3%	2.4%	3.7%	0.0%	0.00%	0.0%	0.00%
789	Agua SUD	179,826	198,972	N/A	N/A	7.9%	3.4%	0.00%	3.4%	0.00%
615	Alamo Area COG	1,056,244	1,034,257	8.0%	9.5%	1.0%	(0.7%)	2.00%	(2.7%)	2.00%
100	Anderson County	742,359	776,917	7.8%	1.4%	(0.6%)	1.5%	3.00%	(1.5%)	3.00%
691	Anderson County Central AD	55,671	38,858	3.7%	0.4%	6.2%	(11.3%)	0.00%	(11.3%)	0.00%
101	Andrews County	803,077	807,233	8.4%	5.9%	2.4%	0.2%	3.00%	(2.8%)	3.00%
875	Andrews County AD	24,751	24,218	N/A	N/A	N/A	(0.7%)	0.00%	(0.7%)	0.00%
684	Angelina and Nacogdoches Co. WCID #1	13,453	16,042	5.1%	3.3%	2.8%	6.0%	0.00%	6.0%	0.00%
102	Angelina County	1,239,317	1,188,487	8.1%	(0.1%)	2.9%	(1.4%)	3.00%	(4.4%)	3.00%
502	Angelina County AD	62,753	63,548	7.3%	(0.4%)	5.2%	0.4%	3.00%	(2.6%)	3.00%
576	Angleton DD	49,848	50,974	5.1%	0.8%	3.6%	0.7%	0.00%	0.7%	0.00%
614	Aquilla WSD - Hill County	36,749	42,350	9.1%	5.8%	6.2%	4.8%	0.00%	4.8%	0.00%
103	Aransas County	687,758	729,784	12.8%	4.5%	3.6%	2.0%	3.00%	(1.0%)	3.00%
459	Aransas County AD	34,555	34,658	10.5%	(3.2%)	7.5%	0.1%	0.00%	0.1%	0.00%
668	Aransas County ND	54,487	56,667	13.8%	9.5%	4.2%	1.3%	0.00%	1.3%	0.00%
104	Archer County	209,242	219,665	7.3%	6.0%	4.8%	1.6%	2.25%	(0.6%)	2.25%
503	Archer County AD	9,576	7,935	4.6%	5.1%	2.8%	(6.1%)	1.50%	(7.6%)	1.50%
964	Ark-Tex COG	N/A	250,854	N/A	N/A	N/A	N/A	1.00%	0.0%	1.00%
105	Armstrong County	59,748	59,069	1.7%	0.9%	3.4%	(0.4%)	1.50%	(1.9%)	1.50%
1011	Armstrong County AD	N/A	5,614	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
106	Atascosa County	1,342,522	1,450,890	10.7%	5.9%	12.7%	2.6%	3.00%	(0.4%)	3.00%
551	Atascosa County AD	46,823	50,543	0.9%	4.7%	7.9%	2.6%	0.00%	2.6%	0.00%
950	Athens MWA	14,405	14,470	N/A	N/A	N/A	0.1%	0.00%	0.1%	0.00%
107	Austin County	713,646	803,488	10.4%	2.6%	7.7%	4.0%	3.00%	1.0%	3.00%
461	Austin County AD	48,980	51,461	7.0%	(3.2%)	8.6%	1.7%	3.00%	(1.3%)	3.00%
994	Austin County ECD	5,454	5,751	N/A	N/A	N/A	1.8%	0.00%	1.8%	0.00%
597	Bacliff MUD	56,799	53,282	1.9%	6.9%	8.0%	(2.1%)	0.00%	(2.1%)	0.00%
108	Bailey County	217,598	233,445	8.3%	0.4%	9.5%	2.4%	3.00%	(0.6%)	3.00%
945	Ballinger Memorial HD	312,314	406,868	N/A	N/A	N/A	9.2%	1.00%	8.2%	1.00%
109	Bandera County	664,104	690,801	10.2%	9.6%	3.2%	1.3%	3.00%	(1.7%)	3.00%
918	Bastrop CAD	71,732	80,594	N/A	N/A	N/A	4.0%	0.00%	4.0%	0.00%
110	Bastrop County	1,959,724	2,078,157	9.7%	1.8%	5.6%	2.0%	3.00%	(1.0%)	3.00%
812	Bastrop County ESD #1	36,564	57,683	N/A	N/A	10.8%	16.4%	0.00%	16.4%	0.00%
915	Bastrop County ESD #2	12,707	32,091	N/A	N/A	N/A	36.2%	0.00%	36.2%	0.00%
398	Bastrop County WCID #2	N/A	46,991	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
111	Baylor County	94,573	104,908	8.7%	(0.8%)	1.8%	3.5%	2.75%	0.8%	2.75%
685	Baylor County AD	6,145	7,302	3.4%	2.0%	(5.6%)	5.9%	0.00%	5.9%	0.00%
613	Bayview ID #11	9,763	11,259	1.8%	(20.1%)	28.5%	4.9%	0.00%	4.9%	0.00%
690	Bayview MUD	20,716	20,862	2.1%	3.9%	7.5%	0.2%	0.00%	0.2%	0.00%
112	Bee County	474,971	481,470	1.1%	2.1%	(2.0%)	0.5%	3.00%	(2.5%)	2.50%
113	Bell County	4,336,384	4,528,749	7.4%	1.5%	4.6%	1.5%	3.00%	(1.5%)	3.00%
506	Bell County AD	204,581	194,706	5.0%	4.1%	2.9%	(1.6%)	2.00%	(3.6%)	2.00%
418	Bell County WCID #1	197,954	190,068	6.4%	10.2%	0.8%	(1.3%)	2.25%	(3.6%)	2.25%
378	Bell County WCID #3	N/A	35,623	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
708	Benbrook WA	177,552	175,620	3.9%	1.9%	2.3%	(0.4%)	1.00%	(1.4%)	1.00%
472	Bexar AD	694,783	698,412	3.0%	2.5%	1.6%	0.2%	1.00%	(0.8%)	1.00%
114	Bexar County	21,226,603	24,406,273	7.1%	0.4%	4.3%	4.8%	3.00%	1.8%	3.00%
373	Bexar County ESD #10	N/A	101,169	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
1001	Bexar County ESD #6	N/A	428	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
979	Bexar County ESD #8	21,637	36,905	N/A	N/A	N/A	19.5%	0.00%	19.5%	0.00%
828	Bexar County ESD 7	101,392	202,284	N/A	N/A	10.8%	25.9%	0.00%	25.9%	0.00%
861	Bexar County ESD No.2	210,203	434,280	N/A	N/A	38.6%	27.4%	0.00%	27.4%	1.00%
544	Bexar County WCID #10	28,536	33,064	7.7%	0.9%	4.9%	5.0%	0.00%	5.0%	0.00%
716	Bexar Metro 911 Network District	145,718	170,854	N/A	(1.3%)	9.9%	5.4%	0.00%	5.4%	0.00%
737	Bexar-Medina-Atascosa WCID #1	75,254	80,718	N/A	3.5%	4.8%	2.4%	0.00%	2.4%	0.00%
616	Bistone MWSD - Limestone County	26,038	27,551	(1.2%)	3.6%	2.7%	1.9%	0.00%	1.9%	0.00%
115	Blanco County	212,106	237,569	6.1%	5.7%	4.0%	3.9%	3.00%	0.9%	3.00%
1016	Blanco County ESD No. 2	N/A	39,864	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
965	Bluebonnet GCD	4,141	11,505	N/A	N/A	N/A	40.6%	0.00%	40.6%	0.00%
116	Borden County	68,825	67,365	5.4%	5.6%	1.5%	(0.7%)	1.50%	(2.2%)	1.50%
525	Borden County AD	6,041	7,620	(13.8%)	52.8%	1.0%	8.0%	2.25%	5.8%	2.25%
117	Bosque County	354,681	339,494	10.0%	1.6%	6.0%	(1.4%)	3.00%	(4.4%)	3.00%
521	Bosque County Central AD	22,405	20,307	6.6%	(8.5%)	10.2%	(3.2%)	0.00%	(3.2%)	0.00%
118	Bowie County	959,071	1,005,469	4.8%	3.3%	(0.3%)	1.6%	3.00%	(1.4%)	3.00%
119	Brazoria County	6,206,990	6,524,242	7.4%	1.4%	5.6%	1.7%	3.00%	(1.3%)	3.00%
508	Brazoria County AD	217,612	233,030	7.6%	4.2%	6.6%	2.3%	2.00%	0.3%	2.00%
413	Brazoria County CRD #3	148,396	182,809	5.0%	5.0%	4.5%	7.2%	2.00%	5.2%	2.00%
424	Brazoria County DD #4	328,745	344,138	14.2%	3.4%	7.8%	1.5%	2.50%	(1.0%)	2.50%
681	Brazoria County DD #5	47,295	67,835	17.3%	10.0%	5.9%	12.8%	0.00%	12.8%	1.00%
1050	Brazoria County ESD No. 3	N/A	68,911	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
689	Brazos Central AD	122,884	130,077	4.5%	0.9%	4.3%	1.9%	1.00%	0.9%	1.00%
120	Brazos County	3,411,478	3,810,603	7.7%	2.5%	4.9%	3.8%	3.00%	0.8%	3.00%

No.	Employer Name	Monthly Payroll		Annual Growth				Expected 2016-19 Growth	Actual Growth More/(Less) Than Expected 2016-19	Proposed Assumption
		12/31/2016	12/31/2019	2004-08	2008-12	2012-16	2016-19			
600	Brazos County ECD	173,752	211,606	8.0%	0.8%	7.1%	6.8%	2.00%	4.8%	2.00%
849	Brazos Regional PUA	76,859	66,357	N/A	N/A	2.7%	(4.8%)	0.00%	(4.8%)	0.00%
744	Brazos River Auth.	1,168,479	1,198,595	N/A	(1.4%)	2.2%	0.9%	2.00%	(1.1%)	2.00%
967	Brazos Transit District	N/A	342,559	N/A	N/A	N/A	N/A	2.00%	0.0%	2.00%
806	Brazos Valley COG	325,547	331,175	N/A	N/A	6.2%	0.6%	1.00%	(0.4%)	1.00%
809	Brazos Valley ECD	15,889	17,763	N/A	N/A	N/A	3.8%	0.00%	3.8%	0.00%
121	Brewster County	280,923	275,850	8.3%	1.8%	8.7%	(0.6%)	3.00%	(3.6%)	3.00%
581	Brewster County AD	18,434	19,701	16.8%	5.7%	0.7%	2.2%	0.00%	2.2%	0.00%
745	Bright Star-Salem SUD	29,893	29,981	N/A	10.2%	5.3%	0.1%	0.00%	0.1%	0.00%
122	Briscoe County	51,295	54,339	5.2%	1.9%	7.1%	1.9%	0.50%	1.4%	0.50%
1052	Brookeland FWSD	N/A	17,546	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
876	Brookesmith SUD	45,443	45,198	N/A	N/A	N/A	(0.2%)	0.00%	(0.2%)	0.00%
123	Brooks County	296,951	321,172	3.1%	(2.5%)	3.4%	2.6%	3.00%	(0.4%)	3.00%
554	Brookshire - Katy DD	40,430	36,018	2.1%	9.2%	8.2%	(3.8%)	0.00%	(3.8%)	0.00%
522	Brookshire MWD	24,653	12,678	(0.2%)	(1.1%)	1.9%	(19.9%)	0.00%	(19.9%)	0.00%
124	Brown County	599,392	628,475	7.0%	2.8%	3.6%	1.6%	3.00%	(1.4%)	3.00%
702	Brownsville ID	33,470	32,312	4.2%	1.0%	1.4%	(1.2%)	0.00%	(1.2%)	0.00%
1055	Brush Country GCD	N/A	11,707	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
642	Brushy Creek MUD - Williamson County	207,294	301,495	10.3%	2.3%	4.0%	13.3%	2.00%	11.3%	2.00%
125	Burleson County	361,029	388,514	8.7%	2.8%	4.3%	2.5%	3.00%	(0.5%)	3.00%
978	Burleson County AD	25,535	28,311	N/A	N/A	N/A	3.5%	0.00%	3.5%	0.00%
609	Burnet Central AD	64,636	65,803	3.7%	2.1%	0.3%	0.6%	0.00%	0.6%	0.00%
126	Burnet County	1,279,217	1,401,377	7.3%	1.8%	12.9%	3.1%	3.00%	0.1%	3.00%
127	Caldwell County	713,353	818,291	6.0%	7.0%	4.2%	4.7%	3.00%	1.7%	3.00%
718	Caldwell County AD	51,267	51,258	N/A	3.4%	5.5%	(0.0%)	0.00%	(0.0%)	0.00%
128	Calhoun County	793,755	840,292	11.1%	(1.0%)	5.3%	1.9%	3.00%	(1.1%)	3.00%
709	Calhoun County AD	55,193	53,620	2.4%	4.6%	2.0%	(1.0%)	0.00%	(1.0%)	0.00%
788	Calhoun County E911 ECD	3,536	4,585	N/A	N/A	7.5%	9.1%	0.00%	9.1%	0.00%
129	Callahan County	145,542	149,819	2.7%	2.5%	4.0%	1.0%	1.50%	(0.5%)	1.50%
542	Callahan County AD	12,090	16,320	4.5%	3.7%	(7.4%)	10.5%	0.00%	10.5%	0.00%
130	Cameron County	5,734,674	5,574,953	5.3%	1.9%	3.4%	(0.9%)	3.00%	(3.9%)	3.00%
618	Cameron County AD	197,756	239,642	4.4%	3.5%	3.6%	6.6%	1.00%	5.6%	1.00%
692	Cameron County DD #1	50,979	65,300	10.4%	7.6%	(0.6%)	8.6%	0.00%	8.6%	0.00%
664	Cameron County DD #3	63,709	71,142	11.8%	1.0%	3.3%	3.7%	0.00%	3.7%	0.00%
686	Cameron County DD #5	11,921	11,855	4.2%	3.7%	4.8%	(0.2%)	0.00%	(0.2%)	0.00%
851	Cameron County ECD	37,175	45,590	N/A	N/A	23.0%	7.0%	0.00%	7.0%	0.00%
462	Cameron County ID #2	97,894	105,634	8.7%	7.6%	(4.7%)	2.6%	2.25%	0.3%	2.25%
590	Cameron County ID #6	25,149	30,234	3.0%	2.7%	0.6%	6.3%	0.00%	6.3%	0.00%
900	Cameron County RMA	56,727	103,838	N/A	N/A	N/A	22.3%	0.00%	22.3%	0.00%
670	Camp Central AD	23,880	24,767	(1.0%)	(1.8%)	14.0%	1.2%	0.00%	1.2%	0.00%
131	Camp County	161,831	154,885	6.3%	2.3%	3.6%	(1.5%)	2.25%	(3.7%)	2.25%
367	Caney Creek MUD	35,461	37,577	N/A	N/A	N/A	2.0%	0.00%	2.0%	0.00%
379	Canyon Lake CLD	N/A	25,194	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
1021	Canyon Regional Water Authority	N/A	86,832	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
132	Carson County	224,907	196,082	6.5%	5.1%	6.7%	(4.5%)	2.50%	(7.0%)	2.50%
133	Cass County	463,195	466,718	4.0%	(4.3%)	5.4%	0.3%	3.00%	(2.7%)	3.00%
610	Cass County AD	21,816	20,444	3.9%	(8.8%)	5.4%	(2.1%)	0.00%	(2.1%)	0.00%
134	Castro County	162,460	179,537	2.8%	2.2%	3.9%	3.4%	3.00%	0.4%	3.00%
719	Central AD of Bandera County	39,508	44,105	N/A	2.3%	13.7%	3.7%	0.00%	3.7%	0.00%
635	Central AD of Johnson County	153,460	144,621	4.7%	3.6%	1.6%	(2.0%)	1.50%	(3.5%)	1.50%
602	Central AD of Taylor County	128,986	137,951	4.6%	2.4%	0.7%	2.3%	1.50%	0.8%	1.50%
862	Central Texas ECD	15,945	15,922	N/A	N/A	7.4%	(0.0%)	0.00%	(0.0%)	0.00%
712	Central Texas RMA	267,317	327,965	63.6%	7.5%	12.8%	7.1%	1.00%	6.1%	2.00%
648	Central WCID - Angelina County	15,539	17,636	1.9%	4.0%	6.7%	4.3%	0.00%	4.3%	0.00%
135	Chambers County	1,571,124	1,903,231	6.5%	0.1%	8.3%	6.6%	3.00%	3.6%	3.00%
531	Chambers County AD	64,331	64,838	2.6%	4.4%	3.9%	0.3%	0.00%	0.3%	0.00%
548	Chambers County Public HD	472,924	463,487	13.9%	15.1%	6.0%	(0.7%)	1.00%	(1.7%)	1.00%
136	Cherokee County	755,388	750,450	7.3%	2.1%	2.9%	(0.2%)	3.00%	(3.2%)	3.00%
137	Childress County	184,915	204,361	8.7%	5.9%	4.3%	3.4%	2.50%	0.9%	2.50%
511	Childress County AD	4,910	5,102	1.9%	0.5%	(7.0%)	1.3%	0.00%	1.3%	0.00%
582	Childress County HD	1,150,126	1,178,656	7.6%	1.9%	10.6%	0.8%	2.00%	(1.2%)	2.00%
138	Clay County	266,638	246,740	5.0%	5.7%	4.6%	(2.6%)	3.00%	(5.6%)	3.00%
485	Clay County AD	18,365	12,036	4.8%	4.6%	(3.5%)	(13.1%)	0.00%	(13.1%)	0.00%
703	Coastal Bend ECD	10,271	11,097	10.2%	1.9%	4.6%	2.6%	0.00%	2.6%	0.00%
722	Coastal Plains ECD	3,764	4,348	N/A	8.0%	5.0%	4.9%	0.00%	4.9%	0.00%
139	Cochran County	171,597	181,491	4.8%	6.4%	1.8%	1.9%	3.00%	(1.1%)	3.00%
477	Cochran County AD	7,228	7,532	(1.6%)	0.2%	0.5%	1.4%	0.00%	1.4%	0.00%
140	Coke County	73,549	86,379	6.3%	3.1%	(4.4%)	5.5%	1.50%	4.0%	1.50%
751	Coke County AD	7,952	5,210	N/A	2.9%	5.8%	(13.2%)	0.00%	(13.2%)	0.00%
946	Coke County Soil and WCD #219	2,384	1,527	N/A	N/A	N/A	(13.8%)	0.00%	(13.8%)	0.00%
141	Coleman County	143,684	151,627	7.1%	3.9%	2.4%	1.8%	1.50%	0.3%	1.50%
142	Collin County	7,773,350	8,632,016	6.6%	0.4%	2.5%	3.6%	3.00%	0.6%	3.00%
457	Collin County Central AD	552,125	646,184	9.1%	2.2%	7.5%	5.4%	2.75%	2.6%	2.75%
143	Collingsworth County	91,311	89,296	(1.3%)	1.0%	13.2%	(0.7%)	0.50%	(1.2%)	0.50%
961	Collingsworth County AD	9,846	9,081	N/A	N/A	N/A	(2.7%)	0.00%	(2.7%)	0.00%
144	Colorado County	554,619	564,574	10.2%	4.2%	3.9%	0.6%	3.00%	(2.4%)	3.00%
623	Comal AD	96,426	120,359	7.6%	2.8%	4.9%	7.7%	1.00%	6.7%	1.00%
145	Comal County	2,515,012	2,823,820	6.0%	2.9%	5.6%	3.9%	3.00%	0.9%	3.00%
775	Comal County ESD #3	216,372	279,329	N/A	N/A	1.8%	8.9%	0.00%	8.9%	0.50%
996	Comanche CAD	N/A	21,516	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
146	Comanche County	330,206	334,905	3.5%	2.0%	2.2%	0.5%	3.00%	(2.5%)	3.00%

No.	Employer Name	Monthly Payroll		Annual Growth				Expected 2016-19 Growth	Actual Growth More/(Less) Than Expected 2016-19	Proposed Assumption
		12/31/2016	12/31/2019	2004-08	2008-12	2012-16	2016-19			
762	Combined Consumers SUD	58,812	68,923	N/A	(7.6%)	7.5%	5.4%	0.00%	5.4%	0.00%
147	Concho County	109,495	108,244	3.6%	6.4%	3.4%	(0.4%)	3.00%	(3.4%)	3.00%
366	Concho County AD	8,048	6,320	N/A	N/A	N/A	(7.7%)	0.00%	(7.7%)	0.00%
636	Concho County HD	250,286	238,217	17.3%	11.9%	18.7%	(1.6%)	0.00%	(1.6%)	1.00%
759	Concho Valley COG	358,776	545,127	N/A	2.0%	2.0%	15.0%	2.00%	13.0%	2.00%
148	Cooke County	901,645	984,992	9.1%	1.4%	5.1%	3.0%	3.00%	(0.0%)	3.00%
487	Cooke County AD	63,001	66,432	1.9%	3.5%	5.8%	1.8%	1.50%	0.3%	1.50%
149	Coryell County	610,324	665,783	8.8%	1.0%	3.2%	2.9%	3.00%	(0.1%)	3.00%
150	Cottle County	33,401	45,492	6.8%	1.7%	(4.4%)	10.8%	1.50%	9.3%	1.50%
727	Cow Creek ECD	13,060	14,466	N/A	7.4%	0.8%	3.5%	0.00%	3.5%	0.00%
151	Crane County	248,552	274,105	(8.1%)	5.5%	4.6%	3.3%	2.25%	1.1%	2.25%
392	Crane County AD	N/A	3,598	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
757	Crane County HD	251,390	249,469	N/A	9.1%	8.8%	(0.3%)	-2.00%	(2.3%)	2.00%
152	Crockett County	494,537	521,905	5.2%	2.7%	3.0%	1.8%	2.75%	(0.9%)	2.75%
907	Crockett County AD	7,132	7,753	N/A	N/A	N/A	2.8%	0.00%	2.8%	0.00%
409	Crockett County WCID #1	35,637	42,715	5.0%	2.1%	4.1%	6.2%	0.50%	5.7%	0.50%
153	Crosby County	107,628	101,766	1.9%	2.3%	0.9%	(1.8%)	3.00%	(4.8%)	2.50%
532	Crosby County AD	9,286	5,973	15.2%	3.1%	5.1%	(13.7%)	3.00%	(16.7%)	2.00%
603	Crosby MUD	49,895	48,754	0.8%	9.0%	1.1%	(0.8%)	0.00%	(0.8%)	0.00%
710	Cross Roads SUD	16,639	17,803	6.0%	(3.6%)	11.8%	2.3%	0.00%	2.3%	0.00%
902	Crysal Clear SUD	62,940	131,103	N/A	N/A	N/A	27.7%	0.00%	27.7%	0.00%
154	Culberson County	172,231	234,826	8.1%	(0.1%)	7.0%	10.9%	3.00%	7.9%	3.00%
1000	Cypress Springs SUD	N/A	76,625	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
155	Dallam County	206,890	210,931	11.3%	4.4%	3.9%	0.6%	3.00%	(2.4%)	3.00%
771	Dallam County AD	13,825	15,478	N/A	N/A	8.3%	3.8%	0.00%	3.8%	0.00%
467	Dallas Central AD	1,175,725	1,223,619	3.9%	(0.2%)	1.3%	1.3%	-2.75%	(1.4%)	2.75%
156	Dallas County	31,843,275	33,177,594	8.3%	(1.4%)	4.9%	1.4%	3.00%	(1.6%)	3.00%
430	Dallas County Park Cities MUD	101,623	118,233	2.3%	5.3%	(2.0%)	5.2%	2.00%	3.2%	2.00%
157	Dawson County	357,675	352,820	5.5%	0.7%	3.6%	(0.5%)	3.00%	(3.5%)	3.00%
463	Dawson County Central AD	18,245	21,861	(1.7%)	6.6%	4.4%	6.2%	2.25%	4.0%	2.25%
158	Deaf Smith County	403,870	387,506	4.8%	2.3%	2.7%	(1.4%)	3.00%	(4.4%)	3.00%
578	Deaf Smith County HD	739,261	642,020	(2.2%)	3.7%	7.7%	(4.6%)	0.00%	(4.6%)	0.00%
363	Deep East Texas COG	N/A	206,960	N/A	N/A	N/A	N/A	1.00%	0.0%	1.00%
159	Delta County	125,144	125,530	11.4%	3.5%	6.6%	0.1%	1.50%	(1.4%)	1.50%
855	Delta County AD	8,296	9,595	N/A	N/A	3.3%	5.0%	0.00%	5.0%	0.00%
734	Delta County MUD	12,228	12,289	N/A	0.8%	5.7%	0.2%	0.00%	0.2%	0.00%
732	Delta Lake ID	111,025	113,692	N/A	5.6%	1.0%	0.8%	0.00%	0.8%	0.00%
583	Denco Area 911 District - Denton County	84,445	80,187	7.2%	3.3%	2.4%	(1.7%)	0.00%	(1.7%)	0.00%
482	Denton Central AD	464,662	489,377	6.9%	3.7%	6.5%	1.7%	2.50%	(0.8%)	2.50%
160	Denton County	7,654,453	8,365,816	4.4%	1.0%	5.5%	3.0%	3.00%	0.0%	3.00%
1005	Denton County FWSD #10	N/A	105,583	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
1006	Denton County FWSD #10	N/A	6,640	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
758	Denton County FWSD 1A	130,125	128,538	N/A	4.2%	6.6%	(0.4%)	0.00%	(0.4%)	0.00%
783	Denton County Transportation Auth.	182,372	276,859	N/A	N/A	12.3%	14.9%	0.00%	14.9%	0.50%
161	DeWitt County	540,866	550,101	6.5%	10.4%	9.2%	0.6%	3.00%	(2.4%)	3.00%
466	DeWitt County AD	40,270	41,401	11.0%	6.4%	5.8%	0.9%	0.00%	0.9%	0.00%
162	Dickens County	81,813	84,157	1.9%	1.6%	4.6%	0.9%	2.25%	(1.3%)	2.25%
764	Dickens County AD	6,432	6,139	N/A	N/A	2.3%	(1.5%)	0.00%	(1.5%)	0.00%
163	Dimmit County	519,216	545,270	10.6%	10.0%	18.0%	1.6%	1.50%	0.1%	1.50%
164	Donley County	75,899	86,980	7.6%	2.5%	3.4%	4.6%	1.50%	3.1%	1.50%
165	Duval County	507,585	397,911	5.6%	3.9%	2.5%	(7.8%)	3.00%	(10.8%)	3.00%
929	Duval County AD	13,648	13,212	N/A	N/A	N/A	(1.1%)	0.00%	(1.1%)	0.00%
880	Duval County ECD	6,428	15,479	N/A	N/A	N/A	34.0%	0.00%	34.0%	0.00%
879	East Fork SUD	40,233	43,379	N/A	N/A	N/A	2.5%	0.00%	2.5%	0.00%
376	East Harris County ESJPB	N/A	66,131	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
825	East Medina County SUD	40,701	52,388	N/A	N/A	4.2%	8.8%	0.00%	8.8%	0.00%
166	Eastland County	345,981	341,941	5.6%	2.3%	5.9%	(0.4%)	3.00%	(3.4%)	3.00%
593	Eastland County AD	25,655	29,850	8.9%	1.6%	6.5%	5.2%	0.00%	5.2%	0.00%
624	ECD of Ector County	16,689	26,608	4.0%	(1.5%)	3.1%	16.8%	0.00%	16.8%	0.00%
167	Ector County	2,663,473	2,831,729	8.8%	3.3%	4.7%	2.1%	3.00%	(0.9%)	3.00%
939	Ector County AD	135,440	128,942	N/A	N/A	N/A	(1.6%)	0.00%	(1.6%)	0.00%
580	Ector County HD	9,110,991	9,534,260	9.2%	2.1%	6.4%	1.5%	3.00%	(1.5%)	3.00%
448	Edwards Aquifer Auth. - Bexar County	564,891	590,626	22.2%	6.8%	5.8%	1.5%	0.00%	1.5%	1.00%
628	Edwards Central AD	8,211	9,526	42.1%	(7.1%)	1.4%	5.1%	3.00%	2.1%	3.00%
168	Edwards County	96,850	98,966	8.3%	1.2%	5.2%	0.7%	1.50%	(0.8%)	1.50%
819	El Paso Central AD	576,785	582,064	N/A	N/A	1.8%	0.3%	2.00%	(1.7%)	2.00%
170	El Paso County	14,532,915	14,284,098	7.5%	2.2%	3.7%	(0.6%)	3.00%	(3.6%)	3.00%
567	El Paso County 911 District	70,826	67,757	8.1%	19.6%	2.9%	(1.5%)	0.00%	(1.5%)	0.00%
1013	El Paso County ESD #1	N/A	23,991	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
936	El Paso County ESD #2	76,382	91,566	N/A	N/A	N/A	6.2%	0.00%	6.2%	0.00%
541	El Paso County HD	12,157,425	13,613,948	6.1%	6.8%	5.9%	3.8%	3.00%	0.8%	3.00%
1004	El Paso County WCID No. 1	N/A	416,654	N/A	N/A	N/A	N/A	2.00%	0.0%	2.00%
963	El Paso MH&MR	N/A	2,421,684	N/A	N/A	N/A	N/A	2.00%	0.0%	2.00%
395	Electra HA	N/A	5,468	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
976	Ellis Appraisal District	86,327	100,701	N/A	N/A	N/A	5.3%	0.00%	5.3%	0.00%
169	Ellis County	2,067,598	2,160,745	9.2%	0.0%	4.0%	1.5%	3.00%	(1.5%)	3.00%
859	Emerald Bay MUD	10,320	9,918	N/A	N/A	4.2%	(1.3%)	0.00%	(1.3%)	0.00%
171	Erath County	678,827	675,709	9.7%	3.2%	2.6%	(0.2%)	3.00%	(3.2%)	3.00%
850	Erath County AD	57,479	63,758	N/A	N/A	N/A	3.5%	0.00%	3.5%	0.00%
172	Falls County	309,055	350,148	3.9%	3.7%	2.7%	4.2%	3.00%	1.2%	3.00%
563	Falls County AD	23,638	27,466	1.6%	17.9%	7.1%	5.1%	0.00%	5.1%	0.00%

No.	Employer Name	Monthly Payroll		Annual Growth			Expected 2016-19 Growth	Actual Growth More/(Less) Than Expected 2016-19	Proposed Assumption	
		12/31/2016	12/31/2019	2004-08	2008-12	2012-16				2016-19
173	Fannin County	439,193	451,398	6.8%	0.4%	3.6%	0.9%	3.00%	(2.1%)	3.00%
644	Fannin County AD	55,613	65,362	15.7%	6.3%	5.6%	5.5%	0.00%	5.5%	0.00%
174	Fayette County	751,407	756,226	5.8%	4.7%	2.5%	0.2%	3.00%	(2.8%)	3.00%
951	Fern Bluff MUD	30,923	34,463	N/A	N/A	N/A	3.7%	0.00%	3.7%	0.00%
175	Fisher County	128,112	127,158	11.8%	4.6%	3.9%	(0.2%)	2.00%	(2.2%)	2.00%
432	Fisher County HD	330,462	296,189	6.8%	4.3%	6.9%	(3.6%)	2.50%	(6.1%)	2.50%
176	Floyd County	166,422	180,085	0.1%	4.4%	6.0%	2.7%	3.00%	(0.3%)	3.00%
360	Foard County	67,069	71,053	N/A	N/A	N/A	1.9%	0.00%	1.9%	0.00%
474	Fort Bend Central AD	415,016	510,841	7.5%	4.5%	11.5%	7.2%	2.50%	4.7%	2.50%
178	Fort Bend County	11,919,403	13,364,686	8.7%	3.8%	6.5%	3.9%	3.00%	0.9%	3.00%
974	Fort Bend County ESD #2	154,286	248,658	N/A	N/A	N/A	17.2%	1.00%	16.2%	1.00%
390	Fort Bend County ESD #4	N/A	167,541	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
782	Fort Bend County WCID #2	169,513	183,546	N/A	N/A	1.1%	2.7%	0.00%	2.7%	0.00%
932	Fort Clark MUD	15,183	13,198	N/A	N/A	N/A	(4.6%)	0.00%	(4.6%)	0.00%
860	Fort Griffin SUD	N/A	17,954	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
769	Four Way SUD	19,435	22,962	N/A	N/A	0.5%	5.7%	0.00%	5.7%	0.00%
179	Franklin County	227,539	224,487	6.2%	1.6%	4.1%	(0.4%)	3.00%	(3.4%)	3.00%
1038	Freer WCID	N/A	21,526	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
180	Freestone County	331,648	347,597	9.0%	(1.6%)	(3.6%)	1.6%	3.00%	(1.4%)	3.00%
693	Freestone County AD	52,595	49,725	8.6%	13.1%	1.8%	(1.9%)	0.00%	(1.9%)	0.00%
181	Frio County	426,464	449,208	4.3%	5.2%	8.6%	1.7%	3.00%	(1.3%)	3.00%
509	Frio County AD	31,725	34,368	10.3%	1.4%	(2.5%)	2.7%	0.00%	2.7%	0.00%
182	Gaines County	661,702	678,581	7.9%	4.2%	4.6%	0.8%	3.00%	(2.2%)	3.00%
761	Gaines County AD	25,875	25,061	N/A	(5.1%)	(2.3%)	(1.1%)	0.00%	(1.1%)	0.00%
546	Galveston Central AD	172,123	171,339	(2.0%)	2.3%	3.3%	(0.2%)	1.00%	(1.2%)	1.00%
183	Galveston County	5,142,108	5,388,097	9.3%	(0.1%)	2.9%	1.6%	3.00%	(1.4%)	3.00%
547	Galveston County Consolidated DD	53,999	48,552	1.7%	12.6%	(5.4%)	(3.5%)	0.00%	(3.5%)	0.00%
464	Galveston County DD #1	38,977	37,807	6.5%	(0.9%)	2.7%	(1.0%)	3.00%	(4.0%)	3.00%
433	Galveston County DD #2	40,746	36,020	2.1%	4.1%	4.7%	(4.0%)	0.00%	(4.0%)	0.00%
589	Galveston County ECD	49,099	40,303	4.4%	8.0%	4.2%	(6.4%)	0.00%	(6.4%)	0.00%
821	Galveston County FWSD #6	31,649	32,550	N/A	N/A	4.4%	0.9%	0.00%	0.9%	0.00%
752	Galveston County Health District	1,126,582	1,243,915	N/A	0.9%	2.6%	3.4%	2.00%	1.4%	2.00%
407	Galveston County WCID #1	174,260	183,218	3.8%	2.8%	2.2%	1.7%	2.25%	(0.6%)	2.25%
1020	Galveston County WCID No. 8	N/A	41,123	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
473	Garza Central AD	11,590	10,563	4.6%	0.5%	9.0%	(3.0%)	0.00%	(3.0%)	0.00%
184	Garza County	250,226	225,579	8.7%	6.5%	4.3%	(3.4%)	3.00%	(6.4%)	3.00%
908	Garza County HCD	4,861	5,684	N/A	N/A	N/A	5.4%	0.00%	5.4%	0.00%
885	Gillespie Central AD	43,545	47,702	N/A	N/A	N/A	3.1%	0.00%	3.1%	0.00%
185	Gillespie County	538,505	648,488	6.2%	5.3%	7.1%	6.4%	3.00%	3.4%	3.00%
955	Gillespie County Soil and WCD	1,859	2,233	N/A	N/A	N/A	6.3%	0.00%	6.3%	0.00%
186	Glasscock County	163,872	156,191	2.5%	12.5%	12.1%	(1.6%)	2.25%	(3.8%)	2.25%
942	Glasscock County AD	6,181	8,679	N/A	N/A	N/A	12.0%	0.00%	12.0%	0.00%
187	Goliad County	334,454	323,531	8.8%	1.0%	7.4%	(1.1%)	3.00%	(4.1%)	3.00%
188	Gonzales County	589,763	617,952	8.7%	4.2%	12.3%	1.6%	3.00%	(1.4%)	3.00%
498	Gonzales County AD	48,427	46,393	6.1%	2.7%	8.8%	(1.4%)	3.00%	(4.4%)	3.00%
886	Graham RMC	615,284	576,242	N/A	N/A	N/A	(2.2%)	2.00%	(4.2%)	2.00%
189	Gray County	420,961	399,120	3.2%	2.7%	1.8%	(1.8%)	3.00%	(4.8%)	3.00%
518	Gray County AD	24,760	26,811	5.6%	(5.7%)	(1.1%)	2.7%	3.00%	(0.3%)	2.50%
475	Grayson Central AD	150,578	199,775	5.4%	3.8%	8.4%	9.9%	2.00%	7.9%	2.00%
190	Grayson County	2,173,207	2,332,082	7.7%	1.5%	5.5%	2.4%	3.00%	(0.6%)	3.00%
528	Greater Harris Co. 911 Emerg. Network	322,854	305,222	9.6%	5.3%	3.9%	(1.9%)	2.00%	(3.9%)	2.00%
429	Greenbelt MIWA - Donley County	44,700	44,339	7.0%	(1.7%)	1.7%	(0.3%)	1.50%	(1.8%)	1.50%
191	Gregg County	2,156,666	2,073,597	7.6%	2.6%	2.6%	(1.3%)	3.00%	(4.3%)	3.00%
192	Grimes County	555,165	599,440	8.6%	3.6%	5.8%	2.6%	3.00%	(0.4%)	3.00%
483	Grimes County AD	41,525	54,681	6.0%	1.2%	2.4%	9.6%	0.00%	9.6%	0.00%
587	Guadalupe AD	109,970	127,720	7.2%	5.8%	5.4%	5.1%	1.00%	4.1%	1.00%
193	Guadalupe County	2,333,360	2,454,125	9.6%	4.1%	3.8%	1.7%	3.00%	(1.3%)	3.00%
380	Guadalupe County GCD	N/A	6,863	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
388	Guadalupe-Blanco River Authority	N/A	1,088,178	N/A	N/A	N/A	N/A	2.00%	0.0%	2.00%
526	Gulf Coast WA - Galveston County	355,548	475,218	3.8%	7.2%	7.9%	10.2%	1.00%	9.2%	2.00%
1029	HA of Starr County	N/A	17,671	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
909	HA of the City of Edinburg Texas	68,789	81,296	N/A	N/A	N/A	5.7%	0.00%	5.7%	0.00%
1036	HA of the City of Kirbyville	N/A	15,045	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
1003	HA of the City of Knox City	N/A	7,365	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
917	HA of the City of Mercedes Texas	50,494	49,029	N/A	N/A	N/A	(1.0%)	0.00%	(1.0%)	0.00%
1002	HA of the City of Munday	N/A	12,534	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
1010	HA of Travis County	N/A	125,966	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
194	Hale County	581,938	547,096	2.8%	2.3%	1.8%	(2.0%)	3.00%	(5.0%)	2.50%
195	Hall County	97,042	88,556	4.3%	1.8%	2.5%	(3.0%)	2.25%	(5.3%)	2.25%
787	Hall County AD	7,361	7,420	N/A	N/A	3.7%	0.3%	0.00%	0.3%	0.00%
196	Hamilton County	135,661	143,423	7.7%	0.9%	(2.8%)	1.9%	2.25%	(0.4%)	2.25%
1071	Hamilton County AD	N/A	13,811	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
197	Hansford County	137,303	139,517	6.2%	1.1%	8.1%	0.5%	2.25%	(1.7%)	2.25%
585	Hansford County HD	582,449	660,322	3.7%	6.0%	5.1%	4.3%	2.50%	1.8%	2.50%
198	Hardeman County	138,858	151,749	8.6%	3.0%	(2.4%)	3.0%	2.25%	0.8%	2.25%
199	Hardin County	891,623	940,424	6.2%	2.0%	3.0%	1.8%	3.00%	(1.2%)	3.00%
527	Hardin County AD	50,986	54,428	11.9%	7.1%	(4.8%)	2.2%	0.00%	2.2%	0.00%
887	Hardin County ESD # 2	N/A	122,189	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
888	Hardin County ESD # 29	N/A	145,269	N/A	N/A	N/A	N/A	1.00%	0.0%	1.00%
571	Harlingen ID Cameron County #1	128,487	131,344	4.9%	8.6%	(5.0%)	0.7%	2.00%	(1.3%)	2.00%
200	Harris County	83,534,453	90,787,350	7.7%	(2.2%)	6.0%	2.8%	3.00%	(0.2%)	3.00%

No.	Employer Name	Monthly Payroll		Annual Growth				Expected 2016-19 Growth	Actual Growth More/(Less) Than Expected	Proposed Assumption
		12/31/2016	12/31/2019	2004-08	2008-12	2012-16	2016-19			
598	Harris County AD	2,881,514	2,948,916	7.8%	1.2%	3.9%	0.8%	2.25%	(1.5%)	2.25%
374	Harris County ESD #10	N/A	357,910	N/A	N/A	N/A	N/A	1.00%	0.0%	1.00%
985	Harris County ESD #12	85,547	176,476	N/A	N/A	N/A	27.3%	0.00%	27.3%	0.00%
842	Harris County ESD #13	123,191	290,890	N/A	N/A	N/A	33.2%	0.00%	33.2%	0.00%
975	Harris County ESD #17	N/A	284,694	N/A	N/A	N/A	N/A	1.00%	0.0%	1.00%
382	Harris County ESD #24	N/A	225,896	N/A	N/A	N/A	N/A	1.00%	0.0%	1.00%
944	Harris County ESD #48	485,879	680,644	N/A	N/A	N/A	11.9%	0.00%	11.9%	1.00%
835	Harris County ESD #50	295,311	431,170	N/A	N/A	10.1%	13.4%	1.00%	12.4%	1.50%
988	Harris County ESD #9	3,574	1,045,040	N/A	N/A	N/A	563.8%	0.00%	563.8%	2.00%
948	Harris County ESD No. 46	31,671	371,776	N/A	N/A	N/A	127.3%	0.00%	127.3%	1.00%
364	Harris County FWSD 61	N/A	99,268	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
797	Harris County HA	155,750	129,352	N/A	N/A	(1.9%)	(6.0%)	0.00%	(6.0%)	0.00%
903	Harris County S&CC	42,975	59,129	N/A	N/A	N/A	11.2%	0.00%	11.2%	0.00%
569	Harris County WCID #1	42,864	48,112	3.2%	1.1%	0.5%	3.9%	0.50%	3.4%	0.50%
877	Harris County WCID #36	86,893	94,464	N/A	N/A	N/A	2.8%	0.00%	2.8%	0.00%
625	Harris County WCID #50	27,115	33,887	3.7%	2.9%	1.1%	7.7%	0.00%	7.7%	0.00%
201	Harrison County	984,967	954,919	4.6%	1.5%	3.1%	(1.0%)	3.00%	(4.0%)	3.00%
202	Hartley County	95,925	102,177	4.9%	3.8%	2.6%	2.1%	2.00%	0.1%	2.00%
520	Hartley County AD	14,975	11,487	15.0%	(3.0%)	18.8%	(8.5%)	0.00%	(8.5%)	0.00%
203	Haskell County	136,754	119,035	4.3%	0.9%	3.1%	(4.5%)	3.00%	(7.5%)	3.00%
552	Haskell Memorial HD	272,974	268,054	0.7%	3.9%	16.7%	(0.6%)	1.00%	(1.6%)	1.00%
916	Hays Caldwell PUA	12,219	20,901	N/A	N/A	N/A	19.6%	0.00%	19.6%	0.00%
204	Hays County	3,502,040	4,179,658	8.6%	1.7%	4.0%	6.1%	3.00%	3.1%	3.00%
878	Hays County ESD #5	134,955	196,414	N/A	N/A	N/A	13.3%	0.00%	13.3%	0.00%
799	Hays County ESD #6	107,989	157,928	N/A	N/A	7.8%	13.5%	0.00%	13.5%	0.00%
826	Hays County ESD #8	224,865	267,012	N/A	N/A	N/A	5.9%	0.00%	5.9%	0.00%
943	Heart of Texas COG	122,684	116,483	N/A	N/A	N/A	(1.7%)	0.00%	(1.7%)	0.00%
205	Hemphill County	226,651	227,064	10.4%	3.4%	0.7%	0.1%	3.00%	(2.9%)	3.00%
640	Hemphill County AD	18,870	17,904	3.0%	(0.1%)	8.5%	(1.7%)	0.00%	(1.7%)	0.00%
529	Hemphill County HD	583,702	674,797	16.8%	5.5%	18.1%	5.0%	1.00%	4.0%	2.00%
839	Hemphill County Underground WCD	11,997	10,841	N/A	N/A	1.5%	(3.3%)	0.00%	(3.3%)	0.00%
206	Henderson County	1,276,394	1,343,096	8.8%	0.3%	2.5%	1.7%	3.00%	(1.3%)	3.00%
746	Henderson County 911 CD	10,644	9,158	N/A	30.2%	2.1%	(4.9%)	0.00%	(4.9%)	0.00%
704	Henderson County AD	89,216	80,856	7.1%	3.3%	3.5%	(3.2%)	0.00%	(3.2%)	0.00%
414	Hidalgo and Cameron Counties ID #9	99,950	101,462	5.1%	(0.3%)	3.7%	0.5%	2.00%	(1.5%)	2.00%
207	Hidalgo County	10,833,957	11,080,567	10.6%	3.2%	2.9%	0.8%	3.00%	(2.2%)	3.00%
516	Hidalgo County AD	355,243	378,960	7.4%	3.3%	4.4%	2.2%	3.00%	(0.8%)	3.00%
401	Hidalgo County DD #1	432,275	558,995	5.1%	5.7%	11.0%	8.9%	3.00%	5.9%	3.00%
713	Hidalgo County ID #1	63,771	59,738	2.3%	(2.7%)	4.2%	(2.2%)	0.00%	(2.2%)	0.00%
438	Hidalgo County ID #2	121,620	109,612	3.5%	1.4%	5.8%	(3.4%)	1.00%	(4.4%)	1.00%
486	Hidalgo County ID #6	36,564	40,075	5.5%	(0.8%)	(10.8%)	3.1%	1.50%	1.6%	1.50%
992	Hidalgo MUD #1	25,137	27,027	N/A	N/A	N/A	2.4%	0.00%	2.4%	0.00%
674	High Plains Underground WCD # 1	84,939	84,122	3.7%	6.8%	(0.9%)	(0.3%)	0.00%	(0.3%)	0.00%
1019	High Point SUD	N/A	29,936	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
208	Hill County	614,206	650,545	10.0%	(2.8%)	2.3%	1.9%	3.00%	(1.1%)	3.00%
209	Hockley County	415,089	391,703	7.4%	5.3%	1.8%	(1.9%)	3.00%	(4.9%)	3.00%
728	Hockley County AD	27,392	27,040	N/A	5.2%	1.7%	(0.4%)	0.00%	(0.4%)	0.00%
210	Hood County	1,206,960	1,178,750	11.7%	0.9%	5.1%	(0.8%)	3.00%	(3.8%)	3.00%
971	Hood County AD	70,135	92,610	N/A	N/A	N/A	9.7%	0.00%	9.7%	0.00%
211	Hopkins County	618,658	651,947	8.2%	(1.8%)	2.7%	1.8%	3.00%	(1.2%)	3.00%
661	Hopkins County AD	27,536	33,486	4.4%	3.1%	2.1%	6.7%	0.00%	6.7%	0.00%
212	Houston County	413,064	394,760	8.5%	4.1%	4.1%	(1.5%)	3.00%	(4.5%)	3.00%
694	Houston County AD	31,197	31,269	7.0%	4.2%	2.2%	0.1%	0.00%	0.1%	0.00%
213	Howard County	584,831	614,150	2.3%	5.1%	5.0%	1.6%	3.00%	(1.4%)	3.00%
214	Hudspeth County	235,746	284,335	13.7%	(1.8%)	5.3%	6.4%	3.00%	3.4%	3.00%
215	Hunt County	1,353,789	1,380,860	8.8%	0.1%	3.0%	0.7%	3.00%	(2.3%)	3.00%
749	Hunt County AD	110,256	130,265	N/A	3.3%	8.3%	5.7%	0.00%	5.7%	1.00%
1043	Hurst Creek MUD	N/A	62,185	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
216	Hutchinson County	536,853	538,596	5.9%	2.2%	2.6%	0.1%	2.75%	(2.6%)	2.75%
778	Hutchinson County AD	24,327	22,753	N/A	N/A	3.3%	(2.2%)	0.00%	(2.2%)	0.00%
711	Iraan General HD	302,671	271,941	16.6%	13.4%	7.7%	(3.5%)	3.00%	(6.5%)	3.00%
217	Irion County	119,297	129,848	10.9%	1.8%	7.3%	2.9%	2.00%	0.9%	2.00%
779	Irion County AD	9,863	9,867	N/A	N/A	43.6%	0.0%	0.00%	0.0%	0.00%
218	Jack County	202,389	221,841	6.9%	(9.5%)	4.7%	3.1%	3.00%	0.1%	3.00%
592	Jack County AD	13,941	11,567	(0.2%)	6.1%	2.9%	(6.0%)	0.00%	(6.0%)	0.00%
219	Jackson County	370,227	399,262	6.8%	1.6%	3.1%	2.5%	2.75%	(0.2%)	2.75%
770	Jackson County AD	35,283	38,683	N/A	N/A	5.4%	3.1%	0.00%	3.1%	0.00%
441	Jackson County County-Wide DD	26,100	30,108	(0.1%)	3.6%	(0.5%)	4.9%	0.00%	4.9%	0.00%
972	Jackson County ESD #3	23,928	27,637	N/A	N/A	N/A	4.9%	0.00%	4.9%	0.00%
220	Jasper County	637,773	634,119	5.0%	4.8%	5.9%	(0.2%)	3.00%	(3.2%)	3.00%
393	Jasper County AD	N/A	39,576	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
657	Jasper County WCID #1	9,884	10,346	(1.6%)	3.1%	(4.6%)	1.5%	0.00%	1.5%	0.00%
221	Jeff Davis County	85,464	79,602	9.8%	8.4%	8.8%	(2.3%)	1.50%	(3.8%)	1.50%
222	Jefferson County	5,435,347	5,294,310	5.3%	0.7%	2.2%	(0.9%)	3.00%	(3.9%)	3.00%
810	Jefferson County AD	210,318	197,959	N/A	N/A	N/A	(2.0%)	0.00%	(2.0%)	0.00%
404	Jefferson County DD #3	15,956	16,917	4.9%	(1.2%)	(3.0%)	2.0%	0.00%	2.0%	0.00%
408	Jefferson County DD #6	509,145	506,656	9.3%	4.5%	3.7%	(0.2%)	3.00%	(3.2%)	3.00%
405	Jefferson County DD #7	491,072	500,487	5.8%	3.1%	2.1%	0.6%	3.00%	(2.4%)	3.00%
451	Jefferson County WCID #10	41,680	42,883	7.5%	3.2%	3.4%	1.0%	0.00%	1.0%	0.00%
223	Jim Hogg County	239,799	228,684	3.5%	1.1%	(2.9%)	(1.6%)	2.75%	(4.3%)	2.75%
680	Jim Hogg County AD	12,126	9,830	17.2%	4.6%	2.4%	(6.8%)	0.00%	(6.8%)	0.00%

No.	Employer Name	Monthly Payroll		Annual Growth				Expected 2016-19 Growth	Actual Growth More/(Less) Than Expected 2016-19	Proposed Assumption
		12/31/2016	12/31/2019	2004-08	2008-12	2012-16	2016-19			
656	Jim Hogg County ESD #1	2,943	3,104	(9.2%)	(0.0%)	3.7%	1.8%	0.00%	1.8%	0.00%
641	Jim Hogg County WCID #2	27,746	43,233	(0.5%)	3.0%	2.6%	15.9%	0.00%	15.9%	0.00%
224	Jim Wells County	824,072	827,928	5.1%	4.4%	3.4%	0.2%	3.00%	(2.8%)	3.00%
225	Johnson County	2,129,101	2,296,664	6.1%	4.5%	2.3%	2.6%	3.00%	(0.4%)	3.00%
741	Jonah Water SUD	88,236	140,889	N/A	3.5%	6.1%	16.9%	0.00%	16.9%	1.00%
226	Jones County	274,598	272,866	6.6%	(0.3%)	6.5%	(0.2%)	3.00%	(3.2%)	3.00%
496	Jones County AD	21,722	22,202	3.6%	4.6%	3.5%	0.7%	0.00%	0.7%	0.00%
227	Karnes County	606,404	683,403	2.0%	5.2%	22.7%	4.1%	3.00%	1.1%	3.00%
524	Karnes County AD	15,413	19,139	(1.9%)	6.5%	2.8%	7.5%	0.00%	7.5%	0.00%
455	Karnes County HD	650,264	735,935	9.9%	10.5%	9.4%	4.2%	2.50%	1.7%	2.50%
228	Kaufman County	1,986,674	2,174,973	12.0%	(0.8%)	4.1%	3.1%	3.00%	0.1%	3.00%
662	Kaufman County AD	77,577	96,157	5.1%	(1.4%)	5.5%	7.4%	0.00%	7.4%	0.00%
671	Kendall AD	50,309	52,141	0.9%	5.9%	0.1%	1.2%	0.00%	1.2%	0.00%
229	Kendall County	960,782	1,177,530	10.8%	4.3%	5.3%	7.0%	3.00%	4.0%	3.00%
619	Kendall County WCID #1	24,149	25,665	0.1%	4.1%	2.8%	2.1%	0.00%	2.1%	0.00%
230	Kenedy County	197,446	191,999	12.1%	5.5%	1.9%	(0.9%)	2.25%	(3.2%)	2.25%
854	Kenedy County Central AD	8,850	6,823	N/A	N/A	N/A	(8.3%)	0.00%	(8.3%)	0.00%
906	Kenedy County Fire & ESD No. 1	3,333	4,370	N/A	N/A	N/A	9.4%	0.00%	9.4%	0.00%
231	Kent County	222,812	233,629	8.4%	3.7%	2.4%	1.6%	2.25%	(0.7%)	2.25%
594	Kent County Tax AD	7,607	7,232	6.9%	2.2%	4.3%	(1.7%)	0.00%	(1.7%)	0.00%
232	Kerr County	1,201,936	1,251,936	5.7%	3.8%	2.5%	1.4%	3.00%	(1.6%)	3.00%
956	Kerr County Soil and WCD	1,805	1,864	N/A	N/A	N/A	1.1%	0.00%	1.1%	0.00%
653	Kerr Emergency 911 Network	9,406	9,687	(9.3%)	3.5%	1.0%	1.0%	0.00%	1.0%	0.00%
233	Kimble County	133,076	128,059	14.2%	(1.8%)	(0.4%)	(1.3%)	2.25%	(3.5%)	2.25%
234	King County	54,893	51,674	4.5%	3.7%	0.3%	(2.0%)	2.25%	(4.2%)	2.25%
755	King County AD	4,393	3,800	N/A	0.0%	14.8%	(4.7%)	0.00%	(4.7%)	0.00%
235	Kinney County	182,082	188,994	9.5%	4.7%	5.1%	1.2%	3.00%	(1.8%)	3.00%
579	Kinney County AD	8,459	8,780	5.0%	(2.5%)	5.4%	1.2%	0.00%	1.2%	0.00%
236	Kleberg County	674,986	716,645	1.3%	2.1%	0.6%	2.0%	3.00%	(1.0%)	2.50%
237	Knox County	104,982	103,665	8.6%	4.1%	2.2%	(0.4%)	3.00%	(3.4%)	3.00%
241	La Salle County	954,086	916,631	16.2%	16.4%	32.3%	(1.3%)	3.00%	(4.3%)	3.00%
540	Laguna Madre WD - Cameron County	217,766	251,565	5.7%	3.8%	0.2%	4.9%	2.75%	2.2%	2.75%
867	Lake Cities MUA	91,501	119,037	N/A	N/A	N/A	9.2%	0.00%	9.2%	0.00%
874	Lake Kiowa SUD	27,796	29,440	N/A	N/A	N/A	1.9%	0.00%	1.9%	0.00%
514	Lakeway MUD - Travis County	102,234	116,189	6.7%	0.7%	2.8%	4.4%	1.50%	2.9%	1.50%
238	Lamar County	668,178	685,017	4.8%	2.0%	3.4%	0.8%	3.00%	(2.2%)	3.00%
808	Lamar County AD	56,106	50,839	N/A	N/A	4.7%	(3.2%)	0.00%	(3.2%)	0.00%
239	Lamb County	312,147	305,786	4.2%	5.3%	0.8%	(0.7%)	3.00%	(3.7%)	3.00%
650	Lampasas Central AD	18,017	20,467	6.2%	(0.6%)	3.1%	4.4%	0.00%	4.4%	0.00%
240	Lampasas County	337,229	339,476	3.3%	4.4%	3.2%	0.2%	2.75%	(2.5%)	2.75%
731	LaSalle County AD	33,246	28,526	N/A	5.9%	19.7%	(5.0%)	0.00%	(5.0%)	0.00%
439	Lavaca - Navidad RA - Jackson County	332,642	368,871	6.6%	8.3%	5.7%	3.5%	3.00%	0.5%	3.00%
242	Lavaca County	564,412	602,815	5.7%	1.2%	4.3%	2.2%	3.00%	(0.8%)	3.00%
977	Lee CAD	31,002	27,041	N/A	N/A	N/A	(4.5%)	0.00%	(4.5%)	0.00%
243	Lee County	401,311	398,991	8.4%	3.2%	6.3%	(0.2%)	3.00%	(3.2%)	3.00%
244	Leon County	377,343	382,106	8.4%	0.9%	3.1%	0.4%	3.00%	(2.6%)	3.00%
468	Leon County Central AD	32,989	35,385	0.6%	5.8%	12.5%	2.4%	3.00%	(0.6%)	3.00%
245	Liberty County	1,241,725	1,408,636	7.3%	(0.2%)	5.9%	4.3%	3.00%	1.3%	3.00%
481	Liberty County Central AD	112,617	134,424	9.7%	2.0%	3.5%	6.1%	3.00%	3.1%	3.00%
246	Limestone County	632,856	552,246	6.5%	6.5%	0.5%	(4.4%)	3.00%	(7.4%)	3.00%
695	Limestone County AD	32,352	36,390	7.5%	0.9%	3.6%	4.0%	0.00%	4.0%	0.00%
247	Lipscomb County	185,320	196,263	6.8%	4.2%	4.9%	1.9%	2.50%	(0.6%)	2.50%
248	Live Oak County	418,182	390,191	8.2%	4.8%	13.0%	(2.3%)	3.00%	(5.3%)	3.00%
591	Live Oak County AD	25,596	24,317	(4.9%)	16.4%	0.9%	(1.7%)	0.00%	(1.7%)	0.00%
780	Llano CAD	N/A	34,313	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
249	Llano County	449,460	437,877	6.7%	6.5%	(1.1%)	(0.9%)	3.00%	(3.9%)	3.00%
250	Loving County	107,800	172,600	12.9%	5.2%	13.6%	17.0%	1.50%	15.5%	1.50%
513	Loving County AD	12,620	17,459	21.2%	7.6%	9.2%	11.4%	0.00%	11.4%	0.00%
756	Lower Trinity ECD	4,138	5,123	N/A	2.9%	0.8%	7.4%	0.00%	7.4%	0.00%
714	Lower Valley WD	333,445	339,019	8.8%	4.8%	14.0%	0.6%	1.00%	(0.4%)	1.00%
499	Lubbock Central AD	202,225	190,336	5.2%	(1.7%)	7.2%	(2.0%)	1.00%	(3.0%)	1.00%
251	Lubbock County	4,871,412	4,640,560	8.8%	5.4%	5.1%	(1.6%)	3.00%	(4.6%)	3.00%
425	Lubbock County WCID #1	55,170	46,152	2.0%	16.0%	7.6%	(5.8%)	3.00%	(8.8%)	3.00%
558	Lubbock ECD	59,788	57,348	9.3%	5.3%	8.8%	(1.4%)	0.00%	(1.4%)	0.00%
647	Lubbock Reese Redevelopment Auth.	35,398	46,759	6.3%	(0.4%)	(7.1%)	9.7%	0.00%	9.7%	0.00%
639	Lumberton MUD	145,736	140,840	11.1%	2.0%	5.6%	(1.1%)	2.00%	(3.1%)	2.00%
252	Lynn County	151,964	151,427	3.8%	2.9%	3.9%	(0.1%)	2.50%	(2.6%)	2.50%
497	Lynn County AD	9,727	5,504	1.1%	3.8%	11.4%	(17.3%)	0.00%	(17.3%)	0.00%
442	Lynn County HD	446,036	578,402	2.2%	8.9%	13.7%	9.0%	-2.00%	7.0%	2.00%
630	Macedonia - Eylau MUD - Bowie County	27,895	27,165	2.3%	5.7%	(1.7%)	(0.9%)	0.00%	(0.9%)	0.00%
500	Mackenzie MWA - Briscoe County	17,494	18,090	8.5%	(4.1%)	9.2%	1.1%	0.00%	1.1%	0.00%
256	Madison County	278,727	295,950	12.2%	2.2%	6.4%	2.0%	3.00%	(1.0%)	3.00%
596	Madison County AD	22,952	25,904	6.0%	4.4%	4.5%	4.1%	0.00%	4.1%	0.00%
257	Marion County	159,715	165,959	5.9%	(0.2%)	2.7%	1.3%	3.00%	(1.7%)	3.00%
675	Marion County AD	15,018	17,791	3.6%	(8.7%)	7.8%	5.8%	0.00%	5.8%	0.00%
931	Marion-Cass Soil and WCD	1,862	-	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
658	Marshall-Harrison Co. Health Dist.	10,426	6,303	6.4%	19.3%	2.7%	(15.4%)	0.00%	(15.4%)	0.00%
258	Martin County	280,250	329,520	7.3%	6.6%	11.3%	5.5%	2.50%	3.0%	2.50%
595	Martin County AD	12,547	15,427	3.5%	3.5%	6.8%	7.1%	0.00%	7.1%	0.00%
259	Mason County	162,251	198,646	6.2%	3.5%	14.6%	7.0%	2.50%	4.5%	2.50%
924	Mason County Soil & WCD #223	1,144	1,421	N/A	N/A	N/A	7.5%	0.00%	7.5%	0.00%

No.	Employer Name	Monthly Payroll		Annual Growth				Expected 2016-19 Growth	Actual Growth More/(Less) Than Expected 2016-19	Proposed Assumption
		12/31/2016	12/31/2019	2004-08	2008-12	2012-16	2016-19			
260	Matagorda County	702,260	776,066	2.8%	1.2%	4.5%	3.4%	3.00%	0.4%	3.00%
987	Matagorda County AD	39,938	44,644	N/A	N/A	N/A	3.8%	0.00%	3.8%	0.00%
678	Matagorda County DD	26,519	28,908	(3.2%)	0.9%	8.0%	2.9%	0.00%	2.9%	0.00%
440	Matagorda County HD	1,503,091	1,466,800	2.4%	4.4%	9.5%	(0.8%)	2.00%	(2.8%)	2.00%
677	Matagorda County ND #1	13,102	13,167	9.3%	(6.4%)	(6.5%)	0.2%	0.00%	0.2%	0.00%
261	Maverick County	844,997	942,773	9.8%	(1.2%)	3.2%	3.7%	3.00%	0.7%	3.00%
729	Maverick County HD	250,364	380,464	N/A	2.6%	11.8%	15.0%	1.00%	14.0%	1.00%
453	Maverick County WCID #1	101,880	102,800	8.4%	(0.8%)	3.1%	0.3%	0.00%	0.3%	0.00%
844	McCamey County HD	355,138	529,846	N/A	N/A	0.5%	14.3%	2.00%	12.3%	2.00%
253	McCulloch County	124,042	149,702	2.0%	6.5%	5.7%	6.5%	3.00%	3.5%	3.00%
512	McCulloch County AD	12,634	14,562	2.9%	5.8%	1.9%	4.8%	0.00%	4.8%	0.00%
254	McLennan County	3,540,407	4,258,697	4.8%	2.9%	1.8%	6.4%	3.00%	3.4%	3.00%
725	McLennan County 911 EAD	37,141	40,721	N/A	10.1%	5.1%	3.1%	0.00%	3.1%	0.00%
491	McLennan County AD	156,478	139,457	2.3%	2.1%	(0.1%)	(3.8%)	2.00%	(5.8%)	2.00%
679	McLennan County WCID #2	13,743	14,858	1.4%	2.2%	8.4%	2.6%	0.00%	2.6%	0.00%
1037	McMullen CAD	N/A	13,229	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
255	McMullen County	227,785	206,448	12.4%	17.3%	13.3%	(3.2%)	2.00%	(5.2%)	2.00%
841	Medical Arts Hospital - Dawson County	688,444	456,996	N/A	N/A	4.2%	(12.8%)	2.00%	(14.8%)	2.00%
262	Medina County	768,764	822,248	7.8%	5.7%	5.9%	2.3%	3.00%	(0.7%)	3.00%
705	Medina County 911 District	10,774	11,483	2.4%	14.0%	(1.8%)	2.1%	0.00%	2.1%	0.00%
535	Medina County AD	41,196	50,028	12.0%	(0.2%)	(4.0%)	6.7%	0.00%	6.7%	0.00%
419	Memorial Medical Center - Calhoun County	864,636	907,933	10.5%	(2.7%)	6.3%	1.6%	2.25%	(0.6%)	2.25%
263	Menard County	105,436	108,394	3.6%	7.3%	5.1%	0.9%	2.00%	(1.1%)	2.00%
377	Menard County UWD	N/A	5,260	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
743	Mesa Underground WCD	9,438	8,876	N/A	2.3%	3.8%	(2.0%)	0.00%	(2.0%)	0.00%
669	Middle Rio Grande Development Council	217,559	219,354	(2.5%)	(3.5%)	(2.0%)	0.3%	1.00%	(0.7%)	1.00%
492	Midland Central AD	127,768	119,996	3.7%	2.5%	7.6%	(2.1%)	1.00%	(3.1%)	1.00%
264	Midland County	2,631,943	3,054,324	7.1%	2.9%	5.8%	5.1%	3.00%	2.1%	3.00%
570	Midland ECD	21,362	27,091	4.9%	15.0%	(4.8%)	8.2%	0.00%	8.2%	0.00%
911	Milam AD	24,912	31,641	N/A	N/A	N/A	8.3%	0.00%	8.3%	0.00%
265	Milam County	497,965	519,944	8.8%	5.4%	(1.3%)	1.5%	3.00%	(1.5%)	3.00%
617	Mills Central AD	8,586	10,680	1.7%	5.1%	(5.8%)	7.5%	3.00%	4.5%	3.00%
266	Mills County	146,586	162,878	8.1%	1.5%	5.0%	3.6%	3.00%	0.6%	3.00%
267	Mitchell County	252,112	248,562	6.0%	0.7%	6.8%	(0.5%)	3.00%	(3.5%)	3.00%
484	Mitchell County AD	11,141	5,500	3.3%	(4.2%)	9.4%	(21.0%)	0.00%	(21.0%)	0.00%
919	Monahans HA	26,011	23,862	N/A	N/A	N/A	(2.8%)	0.00%	(2.8%)	0.00%
268	Montague County	399,159	384,555	7.0%	5.8%	4.1%	(1.2%)	3.00%	(4.2%)	3.00%
504	Montague County Tax AD	22,389	21,014	(1.2%)	11.7%	3.6%	(2.1%)	0.00%	(2.1%)	0.00%
605	Montgomery Central AD	379,160	379,959	5.8%	3.0%	8.2%	0.1%	2.00%	(1.9%)	2.00%
269	Montgomery County	10,063,837	11,151,825	9.7%	4.0%	5.9%	3.5%	3.00%	0.5%	3.00%
667	Montgomery County ECD	64,561	70,694	(4.7%)	(1.7%)	1.1%	3.1%	1.00%	2.1%	1.00%
651	Montgomery County ESD #1	314,478	445,289	12.1%	34.7%	18.8%	12.3%	1.00%	11.3%	2.00%
973	Montgomery County ESD #10	23,934	23,296	N/A	N/A	N/A	(0.9%)	0.00%	(0.9%)	0.00%
982	Montgomery County ESD #4	159,847	153,174	N/A	N/A	N/A	(1.4%)	0.00%	(1.4%)	0.00%
999	Montgomery County ESD #7	N/A	193,529	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
800	Montgomery County ESD #8	445,756	594,128	N/A	N/A	17.8%	10.1%	0.00%	10.1%	1.00%
989	Montgomery County ESD #9	121,530	154,080	N/A	N/A	N/A	8.2%	0.00%	8.2%	0.00%
696	Montgomery County ESD No 3	162,035	223,856	26.2%	13.7%	2.9%	11.4%	1.00%	10.4%	2.00%
804	Montgomery County HA	12,504	8,544	N/A	N/A	(5.7%)	(11.9%)	0.00%	(11.9%)	0.00%
763	Montgomery County HD	1,705,251	2,131,026	N/A	N/A	7.5%	7.7%	2.00%	5.7%	2.50%
270	Moore County	588,396	609,923	6.2%	3.6%	3.6%	1.2%	3.00%	(1.8%)	3.00%
733	Moore County AD	21,975	12,954	N/A	11.6%	1.7%	(16.2%)	0.00%	(16.2%)	0.00%
412	Moore County HD	1,446,382	1,625,893	3.0%	6.8%	8.4%	4.0%	3.00%	1.0%	3.00%
271	Morris County	226,250	214,238	4.3%	3.4%	1.8%	(1.8%)	2.25%	(4.1%)	2.25%
738	Mustang SUD	113,714	204,823	N/A	(2.0%)	16.6%	21.7%	0.00%	21.7%	0.00%
273	Nacogdoches County	916,230	855,789	4.9%	2.5%	2.8%	(2.2%)	3.00%	(5.2%)	3.00%
515	Navarro Central AD	38,532	43,207	2.1%	5.0%	1.9%	3.9%	0.00%	3.9%	0.00%
274	Navarro County	1,145,697	1,169,212	6.3%	1.3%	3.7%	0.7%	3.00%	(2.3%)	3.00%
572	Newton Central AD	45,713	45,798	11.9%	5.4%	3.8%	0.1%	0.00%	0.1%	0.00%
275	Newton County	238,538	258,662	8.5%	2.9%	2.2%	2.7%	3.00%	(0.3%)	3.00%
276	Nolan County	407,579	440,203	6.5%	4.3%	5.9%	2.6%	3.00%	(0.4%)	3.00%
962	Nortex RPC	97,310	81,795	N/A	N/A	N/A	(5.6%)	0.00%	(5.6%)	0.00%
1030	North Blanco County ESD No. 1	N/A	36,170	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
556	North Central Texas MWA	35,168	35,906	1.4%	3.5%	5.3%	0.7%	0.00%	0.7%	0.00%
938	North East Texas RMA	30,216	66,173	N/A	N/A	N/A	29.9%	0.00%	29.9%	0.00%
852	North Hunt SUD	21,227	26,112	N/A	N/A	N/A	7.1%	0.00%	7.1%	0.00%
838	North Plains ECD	78,490	68,417	N/A	N/A	N/A	(4.5%)	0.00%	(4.5%)	0.00%
927	North Texas ECC	266,915	321,606	N/A	N/A	N/A	6.4%	0.00%	6.4%	0.00%
646	North Texas Tollway Auth.	3,498,694	3,678,499	11.8%	2.0%	3.7%	1.7%	2.00%	(0.3%)	2.00%
562	Northeast Texas MWD	70,433	74,478	3.3%	2.5%	1.4%	1.9%	0.00%	1.9%	0.00%
632	Northeast Texas Public Health District	466,146	413,138	0.0%	4.9%	3.6%	(3.9%)	2.25%	(6.2%)	2.25%
368	Northern Trinity GCD	N/A	10,475	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
277	Nueces County	4,669,218	4,482,010	3.8%	1.1%	3.9%	(1.4%)	3.00%	(4.4%)	3.00%
683	Nueces County AD	290,706	308,468	2.3%	2.4%	6.0%	2.0%	1.00%	1.0%	1.00%
400	Nueces County DD #2	49,110	59,387	8.3%	3.2%	5.0%	6.5%	0.00%	6.5%	0.00%
791	Nueces County ESD #2	37,647	52,667	N/A	N/A	40.4%	11.8%	0.00%	11.8%	0.00%
416	Nueces County WCID #3	103,346	113,181	4.7%	6.7%	3.6%	3.1%	2.25%	0.8%	2.25%
450	Nueces County WCID #4	90,900	91,156	2.6%	4.5%	10.1%	0.1%	1.00%	(0.9%)	1.00%
278	Ochiltree County	281,309	285,171	4.0%	4.6%	5.3%	0.5%	2.75%	(2.3%)	2.75%
1042	Ochiltree County AD	N/A	25,815	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
279	Oldham County	101,973	115,869	5.5%	2.4%	1.6%	4.4%	2.25%	2.1%	2.25%

No.	Employer Name	Monthly Payroll		Annual Growth			Expected 2016-19 Growth	Actual Growth More/(Less) Than Expected 2016-19	Proposed Assumption	
		12/31/2016	12/31/2019	2004-08	2008-12	2012-16				2016-19
517	Oldham County AD	5,672	9,234	(2.5%)	5.1%	(3.5%)	17.6%	0.00%	17.6%	0.00%
660	Orange Co. Navigation & Port Dist.	49,825	39,721	11.0%	3.1%	2.2%	(7.3%)	0.00%	(7.3%)	0.00%
280	Orange County	1,639,154	1,665,736	9.2%	(0.0%)	(0.9%)	0.5%	3.00%	(2.5%)	3.00%
490	Orange County AD	74,100	74,497	4.3%	6.1%	4.0%	0.2%	0.00%	0.2%	0.00%
421	Orange County DD	238,745	256,594	4.2%	(0.1%)	6.5%	2.4%	2.25%	0.2%	2.25%
665	Orange County ESD # 1	24,348	26,354	2.2%	6.1%	(0.5%)	2.7%	0.00%	2.7%	0.00%
803	Orange County ESD #2	25,139	26,648	N/A	N/A	N/A	2.0%	0.00%	2.0%	0.00%
631	Orange County WCID #1	99,637	127,386	1.4%	12.8%	0.1%	8.5%	0.50%	8.0%	0.50%
730	Palo Duro River Auth.	15,754	9,261	N/A	4.7%	1.4%	(16.2%)	0.00%	(16.2%)	0.00%
723	Palo Pinto AD	53,782	54,799	N/A	4.4%	4.4%	0.6%	0.00%	0.6%	0.00%
281	Palo Pinto County	584,973	627,855	8.2%	1.1%	2.4%	2.4%	3.00%	(0.6%)	3.00%
282	Panola County	636,752	564,905	4.3%	5.0%	3.6%	(3.9%)	3.00%	(6.9%)	3.00%
283	Parker County	2,045,911	2,067,038	9.8%	1.7%	5.3%	0.3%	3.00%	(2.7%)	3.00%
717	Parker County AD	171,647	185,280	N/A	3.3%	7.4%	2.6%	0.00%	2.6%	1.00%
922	Parker County ESD No. 1	72,910	123,494	N/A	N/A	N/A	19.2%	0.00%	19.2%	0.00%
784	Parker County HD	475,962	549,012	N/A	N/A	N/A	10.0%	1.00%	3.9%	1.50%
754	Parker County SUD	39,890	44,737	N/A	10.9%	14.3%	3.9%	0.00%	3.9%	0.00%
284	Parmer County	193,912	202,464	5.5%	4.7%	3.2%	1.4%	3.00%	(1.6%)	3.00%
747	Parmer County AD	13,779	15,812	N/A	3.8%	4.6%	4.7%	0.00%	4.7%	0.00%
765	Pecan Valley ECD	8,943	7,504	N/A	N/A	5.2%	(5.7%)	0.00%	(5.7%)	0.00%
285	Pecos County	1,804,903	1,736,988	5.9%	11.2%	2.2%	(1.3%)	3.00%	(4.3%)	3.00%
494	Pecos County AD	22,430	22,598	5.4%	8.0%	6.7%	0.2%	2.25%	(2.0%)	2.25%
774	Pecos County WCID #1	15,001	19,090	N/A	N/A	7.0%	8.4%	0.00%	8.4%	0.00%
796	Permian Basin RPC	135,791	126,036	N/A	N/A	3.5%	(2.5%)	1.00%	(3.5%)	1.00%
673	Permian RMC	1,685,674	1,669,004	5.7%	4.2%	8.7%	(0.3%)	3.00%	(3.3%)	3.00%
707	Pineywoods ECD	7,877	7,547	12.4%	3.5%	1.4%	(1.4%)	0.00%	(1.4%)	0.00%
697	Polk Central AD	60,769	62,608	3.4%	2.9%	6.0%	1.0%	0.00%	1.0%	0.00%
286	Polk County	938,594	938,135	7.3%	(0.8%)	3.1%	(0.0%)	3.00%	(3.0%)	3.00%
739	Polk County FWSD #2	35,516	45,356	N/A	2.0%	7.0%	8.5%	0.00%	8.5%	0.00%
676	Port of Bay City Auth.	9,800	10,874	6.2%	19.1%	(5.6%)	3.5%	0.00%	3.5%	0.00%
449	Port of Beaumont ND	256,356	300,225	5.2%	3.2%	4.9%	5.4%	2.00%	3.4%	2.00%
280	Port of Corpus Christi Auth.	1,228,564	1,376,193	5.7%	1.6%	7.3%	3.9%	2.25%	1.6%	2.25%
622	Port of Port Arthur ND	156,157	150,007	1.7%	10.6%	5.8%	(1.3%)	1.00%	(2.3%)	1.00%
726	Post Oak Savannah ECD	19,889	26,029	N/A	8.9%	14.0%	9.4%	0.00%	9.4%	0.00%
560	Potter - Randall County ECD	32,722	34,591	3.5%	7.6%	2.5%	1.9%	2.25%	(0.4%)	2.25%
287	Potter County	2,481,303	2,498,304	5.5%	2.3%	1.9%	0.2%	3.00%	(2.8%)	3.00%
840	Prairielands ECD	23,093	23,307	N/A	N/A	N/A	17.3%	0.00%	17.3%	0.00%
626	Presidio AD	13,538	14,206	3.2%	(1.1%)	12.3%	1.6%	0.00%	1.6%	0.00%
288	Presidio County	226,268	211,550	(11.0%)	26.5%	3.3%	(2.2%)	3.00%	(5.2%)	3.00%
289	Rains County	179,155	195,269	5.5%	3.2%	3.5%	2.9%	2.50%	0.4%	2.50%
537	Rains County AD	21,143	18,285	10.8%	3.5%	(1.7%)	(4.7%)	2.25%	(7.0%)	2.00%
290	Randall County	2,199,944	2,257,517	5.4%	3.9%	5.3%	0.9%	3.00%	(2.1%)	3.00%
564	Randall County AD including Potter Co AD	155,319	164,127	1.2%	0.2%	1.1%	1.9%	1.50%	0.4%	1.50%
406	Rankin County HD - Upton County	375,650	447,152	7.5%	21.3%	19.7%	6.0%	1.00%	5.0%	2.00%
823	Rayburn County MUD	22,953	24,539	N/A	N/A	N/A	2.3%	0.00%	2.3%	0.00%
291	Reagan County	367,547	437,616	10.7%	5.1%	10.6%	6.0%	3.00%	3.0%	3.00%
445	Reagan HD	423,070	496,571	7.4%	21.7%	21.5%	5.5%	1.00%	4.5%	2.00%
292	Real County	86,736	87,131	6.8%	2.9%	1.2%	0.2%	2.25%	(2.1%)	2.25%
505	Red Bluff WPCD - Reeves County	12,743	13,237	0.5%	(3.1%)	5.2%	1.3%	0.00%	1.3%	0.00%
845	Red River AD	18,965	19,400	N/A	N/A	3.1%	0.8%	0.00%	0.8%	0.00%
435	Red River Auth.	114,172	134,271	7.7%	4.1%	0.2%	5.6%	2.25%	3.3%	2.25%
293	Red River County	173,455	177,917	8.1%	(1.3%)	2.2%	0.9%	2.25%	(1.4%)	2.25%
921	Red River County Soil and WCD	2,182	1,694	N/A	N/A	N/A	(8.1%)	0.00%	(8.1%)	0.00%
294	Reeves County	2,456,555	2,140,612	3.6%	4.8%	3.9%	(4.5%)	2.50%	(7.0%)	2.50%
786	Reeves County AD	32,567	36,288	N/A	N/A	19.4%	3.7%	0.00%	3.7%	0.00%
588	Reeves County HD	1,076,074	1,251,824	8.3%	4.8%	14.6%	5.2%	3.00%	2.2%	3.00%
295	Refugio County	371,114	369,121	8.0%	9.5%	(1.3%)	(0.2%)	2.75%	(2.9%)	2.75%
543	Refugio County DD #1	18,356	16,861	5.5%	6.1%	2.6%	(2.8%)	0.00%	(2.8%)	0.00%
801	Rio Grande COG	126,756	115,630	N/A	N/A	0.8%	(3.0%)	0.00%	(3.0%)	0.00%
970	Riverside SUD	N/A	28,110	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
296	Roberts County	135,115	134,089	6.9%	5.1%	7.8%	(0.3%)	2.25%	(2.5%)	2.25%
297	Robertson County	447,228	448,149	9.1%	5.2%	(1.1%)	0.1%	3.00%	(2.9%)	3.00%
904	Robertson County AD	25,688	26,223	N/A	N/A	N/A	0.7%	0.00%	0.7%	0.00%
370	Robertson County ESD	N/A	4,060	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
698	Rockwall Central AD	67,170	79,749	5.5%	(1.8%)	5.0%	5.9%	0.00%	5.9%	0.00%
298	Rockwall County	1,306,724	1,405,670	8.8%	3.4%	2.9%	2.5%	3.00%	(0.5%)	3.00%
299	Runnels County	204,302	209,419	2.1%	1.5%	0.7%	0.8%	3.00%	(2.2%)	2.50%
300	Rusk County	913,256	848,031	7.1%	2.6%	3.0%	(2.4%)	3.00%	(5.4%)	3.00%
612	Rusk County AD	49,919	43,258	1.9%	4.8%	3.8%	(4.7%)	0.00%	(4.7%)	0.00%
848	Rusk County ECD	7,759	6,025	N/A	N/A	(7.2%)	(8.1%)	0.00%	(8.1%)	0.00%
301	Sabine County	184,282	202,232	1.1%	5.4%	4.5%	3.1%	3.00%	0.1%	3.00%
863	Sabine County AD	13,072	13,219	N/A	N/A	0.2%	0.4%	0.00%	0.4%	0.00%
568	Sabine Pass Port Auth.	18,436	24,213	1.7%	5.8%	0.5%	9.5%	0.00%	9.5%	0.00%
706	Sabine-Neches ND of Jefferson County Texas	51,371	70,010	16.2%	4.7%	4.0%	10.9%	0.00%	10.9%	0.00%
302	San Augustine County	166,654	178,561	2.0%	14.8%	(1.3%)	2.3%	2.00%	0.3%	2.00%
303	San Jacinto County	483,198	483,524	8.4%	2.9%	6.9%	0.0%	3.00%	(3.0%)	3.00%
553	San Jacinto County Central AD	44,975	56,752	8.7%	2.2%	1.5%	8.1%	1.50%	6.6%	1.50%
990	San Jacinto County ESD	N/A	3,760	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
304	San Patricio County	1,572,536	1,613,700	4.4%	1.5%	4.4%	0.9%	3.00%	(2.1%)	3.00%
495	San Patricio County AD	62,012	72,123	15.0%	(7.1%)	19.2%	5.2%	0.50%	4.7%	0.50%
426	San Patricio County DD	81,682	101,961	0.3%	6.6%	8.2%	7.7%	1.50%	6.2%	1.50%

No.	Employer Name	Monthly Payroll		Annual Growth				Expected 2016-19 Growth	Actual Growth More/(Less) Than Expected 2016-19	Proposed Assumption
		12/31/2016	12/31/2019	2004-08	2008-12	2012-16	2016-19			
750	San Patricio County ND #1	9,958	9,247	N/A	(1.8%)	23.6%	(2.4%)	0.00%	(2.4%)	0.00%
422	San Patricio MWD	235,519	248,503	5.2%	7.9%	3.2%	1.8%	2.75%	(0.9%)	2.75%
305	San Saba County	107,969	123,919	5.4%	4.0%	3.2%	4.7%	2.25%	2.4%	2.25%
766	Santo SUD	14,154	5,540	N/A	N/A	5.3%	(26.8%)	0.00%	(26.8%)	0.00%
306	Schleicher County	119,537	118,655	10.5%	6.9%	(3.1%)	(0.2%)	2.25%	(2.5%)	2.25%
307	Scurry County	680,660	635,291	(14.3%)	7.4%	6.8%	(2.3%)	3.00%	(5.3%)	3.00%
893	Scurry County AD	46,865	41,421	N/A	N/A	N/A	(4.0%)	0.00%	(4.0%)	0.00%
760	Scurry County HD	1,095,094	1,344,225	N/A	(0.5%)	11.0%	7.1%	2.00%	5.1%	2.00%
308	Shackelford County	99,558	123,458	6.9%	1.4%	3.7%	7.4%	1.50%	5.9%	1.50%
470	Shackelford County AD	12,705	14,243	3.3%	1.1%	13.9%	3.9%	0.00%	3.9%	0.00%
309	Shelby County	373,121	366,676	9.4%	1.7%	2.3%	(0.6%)	3.00%	(3.6%)	3.00%
627	Shelby County AD	28,885	25,734	(2.3%)	10.7%	3.3%	(3.8%)	0.00%	(3.8%)	0.00%
310	Sherman County	144,787	144,268	5.2%	3.4%	3.4%	(0.1%)	3.00%	(3.1%)	3.00%
469	Sherman County AD	11,850	9,609	3.2%	3.8%	0.6%	(6.7%)	0.00%	(6.7%)	0.00%
311	Smith County	3,254,998	3,313,490	9.2%	1.1%	4.2%	0.6%	3.00%	(2.4%)	3.00%
555	Smith County 911 CD	27,548	30,654	(31.3%)	4.6%	4.0%	3.6%	1.00%	2.6%	1.00%
606	Smith County AD	203,907	166,298	6.1%	4.0%	5.0%	(6.6%)	2.00%	(8.6%)	2.00%
385	Smith County ESD #2	N/A	159,038	N/A	N/A	N/A	N/A	1.00%	0.0%	1.00%
312	Somervell County	473,386	574,324	5.6%	2.6%	0.3%	6.7%	3.00%	3.7%	3.00%
507	Somervell County Central AD	28,307	30,266	10.1%	5.3%	3.5%	2.3%	0.00%	2.3%	0.00%
699	Somervell County WD	40,091	41,564	25.5%	16.9%	3.0%	1.2%	0.00%	1.2%	0.00%
795	South Plains Assoc. of Governments	114,053	120,281	N/A	N/A	(1.7%)	1.8%	0.00%	1.8%	0.00%
894	South Rains SUD	16,592	17,119	N/A	N/A	N/A	1.0%	0.00%	1.0%	0.00%
645	South Texas Development Council	87,846	86,393	10.0%	4.1%	(1.3%)	(0.6%)	0.00%	(0.6%)	0.00%
768	Southeast Texas ECD	5,465	6,206	N/A	N/A	4.3%	4.3%	0.00%	4.3%	0.00%
930	STAR Transit	N/A	222,963	N/A	N/A	N/A	N/A	-2.00%	0.0%	2.00%
313	Starr County	1,342,729	1,319,872	8.7%	3.2%	5.2%	(0.6%)	3.00%	(3.6%)	3.00%
536	Starr County AD	45,483	52,866	5.7%	3.8%	3.5%	5.1%	0.00%	5.1%	0.00%
314	Stephens County	186,116	167,062	3.4%	6.9%	2.2%	(3.5%)	3.00%	(6.5%)	3.00%
869	Stephens County Tax AD	10,438	3,922	N/A	N/A	N/A	(27.8%)	0.00%	(27.8%)	0.00%
315	Sterling County	211,664	225,493	9.1%	0.3%	9.2%	2.1%	3.00%	(0.9%)	3.00%
837	Sterling County AD	3,824	4,796	N/A	N/A	N/A	7.8%	0.00%	7.8%	0.00%
316	Stonewall County	76,747	69,864	7.5%	4.5%	1.8%	(3.1%)	1.50%	(4.6%)	1.50%
724	Stonewall County AD	6,043	6,329	N/A	0.7%	7.8%	1.6%	0.00%	1.6%	0.00%
458	Stonewall Memorial HD	371,768	379,093	9.6%	6.7%	18.5%	0.7%	2.50%	(1.8%)	2.50%
539	Stratford HD - Sherman County	156,576	154,447	9.6%	3.4%	3.9%	(0.5%)	2.00%	(2.5%)	2.00%
317	Sutton County	217,641	212,819	6.9%	1.2%	1.0%	(0.7%)	3.00%	(3.7%)	3.00%
573	Sutton County HD	329,090	308,890	19.7%	16.4%	(0.6%)	(2.1%)	2.25%	(4.3%)	2.25%
318	Swisher County	134,564	138,502	9.5%	0.9%	3.2%	1.0%	2.25%	(1.3%)	2.25%
460	Swisher County AD	10,972	4,012	7.5%	(2.1%)	5.2%	(28.5%)	0.00%	(28.5%)	0.00%
356	Taitly SUD	N/A	39,839	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
607	Tarrant AD	1,018,577	1,031,886	3.9%	1.4%	2.4%	0.4%	2.00%	(1.6%)	2.00%
545	Tarrant Co 911 EAD	115,397	149,773	3.7%	0.2%	2.4%	9.1%	2.25%	6.8%	2.25%
319	Tarrant County	21,769,743	22,851,750	5.6%	1.0%	3.1%	1.6%	3.00%	(1.4%)	3.00%
574	Tax AD of Cottle County	1,697	3,410	4.9%	1.2%	(13.6%)	26.2%	0.00%	26.2%	0.00%
320	Taylor County	2,110,200	2,295,857	4.2%	3.7%	3.9%	2.9%	3.00%	(0.1%)	3.00%
354	TCDRS	944,946	991,195	7.2%	4.6%	7.1%	1.6%	3.00%	(1.4%)	3.00%
321	Terrell County	118,512	103,785	12.2%	3.9%	(1.0%)	(4.3%)	2.25%	(6.6%)	2.25%
753	Terrell County WCID #1	9,113	8,578	N/A	2.8%	1.2%	(2.0%)	0.00%	(2.0%)	0.00%
322	Terry County	347,285	312,956	1.9%	2.1%	5.4%	(3.4%)	3.00%	(6.4%)	3.00%
402	Terry Memorial HD	618,842	536,927	3.5%	6.9%	4.3%	(4.6%)	2.25%	(6.9%)	2.25%
437	Texas Assoc. of Counties	1,053,609	1,184,841	7.6%	2.0%	6.2%	4.0%	3.00%	1.0%	3.00%
634	Texas Eastern 911 Network	14,586	6,946	3.3%	(0.6%)	2.9%	(21.9%)	0.00%	(21.9%)	0.00%
986	The City of Quanah HA	15,959	19,979	N/A	N/A	N/A	7.8%	0.00%	7.8%	0.00%
772	The HA of the City of Abilene	83,476	84,719	N/A	N/A	6.7%	0.5%	0.00%	0.5%	0.00%
777	The HA of the City of Huntington	10,612	7,108	N/A	N/A	(2.4%)	(12.5%)	0.00%	(12.5%)	0.00%
913	The HA of the City of Pharr Texas	61,322	89,223	N/A	N/A	N/A	13.3%	0.00%	13.3%	0.00%
912	The HA of the County of Hidalgo Texas	114,571	105,466	N/A	N/A	N/A	(2.7%)	0.00%	(2.7%)	0.00%
323	Throckmorton County	58,248	55,624	1.1%	3.5%	2.2%	(1.5%)	1.50%	(3.0%)	1.50%
324	Titus County	419,629	431,678	7.7%	1.7%	(0.2%)	0.9%	3.00%	(2.1%)	3.00%
742	Titus County AD	22,746	26,483	N/A	0.1%	(9.3%)	5.2%	0.00%	5.2%	0.00%
501	Titus County FWSD	34,270	35,837	6.2%	1.6%	(2.0%)	1.5%	0.00%	1.5%	0.00%
325	Tom Green County	2,171,461	2,145,742	7.7%	2.4%	3.1%	(0.4%)	3.00%	(3.4%)	3.00%
601	Travis Central AD	547,823	517,339	5.8%	4.3%	0.8%	(1.9%)	2.00%	(3.9%)	2.00%
326	Travis County	25,264,888	26,629,183	8.8%	2.9%	2.9%	1.8%	3.00%	(1.2%)	3.00%
720	Travis County ESD #1 NLT Fire & Rescue	125,369	247,593	N/A	2.2%	10.1%	25.5%	0.00%	25.5%	1.00%
980	Travis County ESD #11	164,619	286,548	N/A	N/A	N/A	20.3%	0.00%	20.3%	0.00%
836	Travis County ESD #2	617,281	1,073,982	N/A	N/A	N/A	20.3%	1.00%	19.3%	1.00%
371	Travis County ESD #5	N/A	100,937	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
957	Travis County ESD 12	87,359	158,495	N/A	N/A	N/A	22.0%	0.00%	22.0%	0.00%
959	Travis County ESD 12	1,736	1,526	N/A	N/A	N/A	(4.2%)	0.00%	(4.2%)	0.00%
659	Tri-County SUD	29,477	30,256	4.1%	3.2%	7.2%	0.9%	0.00%	0.9%	0.00%
633	Trinity Bay Conservation District	183,500	218,822	9.7%	1.7%	5.0%	6.0%	1.50%	4.5%	1.50%
327	Trinity County	201,174	194,385	8.9%	1.6%	6.1%	(1.1%)	3.00%	(4.1%)	3.00%
857	Trinity County AD	36,656	40,868	N/A	N/A	(1.0%)	3.7%	0.00%	3.7%	0.00%
829	Trinity Glen Rose GCD	N/A	9,294	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
790	Trophy Club MUD No 1	93,430	95,507	N/A	N/A	N/A	0.7%	0.00%	0.7%	0.00%
735	Two Way SUD	26,401	28,414	N/A	7.0%	8.1%	2.5%	0.00%	2.5%	0.00%
328	Tyler County	414,987	435,217	4.6%	6.2%	5.0%	1.6%	3.00%	(1.4%)	3.00%
471	Tyler County AD	39,199	40,084	3.8%	4.0%	2.6%	0.7%	3.00%	(2.3%)	2.00%
561	United ID - Hidalgo County	100,055	87,592	3.7%	4.4%	2.7%	(4.3%)	0.00%	(4.3%)	0.00%

No.	Employer Name	Monthly Payroll		Annual Growth				Expected 2016-19 Growth	Actual Growth More/(Less) Than Expected 2016-19	Proposed Assumption
		12/31/2016	12/31/2019	2004-08	2008-12	2012-16	2016-19			
834	Upper Brushy Creek WCID	22,157	35,067	N/A	N/A	15.2%	16.5%	0.00%	16.5%	0.00%
830	Upper Leon River MWD	53,794	56,935	N/A	N/A	N/A	1.9%	0.00%	1.9%	0.00%
387	Upper Sabine Valley SWMD	N/A	19,281	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
792	Upper Trinity ECD	34,434	45,832	N/A	N/A	15.6%	10.0%	0.00%	10.0%	0.00%
329	Upshur County	567,691	579,212	6.3%	(1.5%)	1.7%	0.7%	3.00%	(2.3%)	3.00%
330	Upton County	401,809	381,362	11.3%	3.8%	3.8%	(1.7%)	3.00%	(4.7%)	3.00%
682	Upton County AD	18,437	13,589	3.7%	(0.7%)	6.5%	(9.7%)	0.00%	(9.7%)	0.00%
331	Uvalde County	800,176	836,214	4.9%	5.4%	6.7%	1.5%	3.00%	(1.5%)	3.00%
332	Val Verde County	806,866	839,271	3.8%	3.1%	4.0%	1.3%	3.00%	(1.7%)	3.00%
663	Valley MUD #2 - Cameron County	52,156	49,707	7.5%	0.4%	7.6%	(1.6%)	0.00%	(1.6%)	0.00%
586	Walwood Improvement Auth. - Dallas County	46,416	46,895	4.9%	1.8%	4.0%	0.3%	0.00%	0.3%	0.00%
333	Van Zandt County	592,340	551,084	4.2%	(0.3%)	4.6%	(2.4%)	3.00%	(5.4%)	3.00%
672	Van Zandt County AD	61,546	56,821	8.6%	1.4%	3.9%	(2.6%)	0.00%	(2.6%)	0.00%
420	Velasco DD - Brazoria County	144,003	158,266	5.8%	(0.3%)	5.7%	3.2%	2.00%	1.2%	2.00%
334	Victoria County	2,430,689	2,281,202	6.1%	1.9%	4.3%	(2.1%)	3.00%	(5.1%)	3.00%
423	Victoria County DD #3	16,406	18,177	3.6%	4.5%	1.7%	3.5%	0.00%	3.5%	0.00%
767	Victoria County ECD	14,499	27,119	N/A	N/A	15.0%	23.2%	0.00%	23.2%	0.00%
335	Walker County	1,514,488	1,506,171	8.0%	2.2%	5.0%	(0.2%)	3.00%	(3.2%)	3.00%
872	Walker County AD	64,245	69,426	N/A	N/A	N/A	2.6%	0.00%	2.6%	0.00%
748	Walker County SUD	35,558	38,213	N/A	4.2%	1.8%	2.4%	0.00%	2.4%	0.00%
336	Waller County	990,912	1,013,057	5.7%	3.0%	8.6%	0.7%	3.00%	(2.3%)	3.00%
773	Waller County AD	68,542	65,645	N/A	N/A	4.8%	(1.4%)	0.00%	(1.4%)	0.00%
337	Ward County	625,939	657,911	5.6%	7.2%	5.3%	1.7%	3.00%	(1.3%)	3.00%
565	Ward County Central AD	10,036	10,910	4.6%	4.6%	(10.8%)	2.8%	0.00%	2.8%	0.00%
444	Ward Memorial Hospital	494,648	490,528	3.4%	4.9%	6.4%	(0.3%)	1.00%	(1.3%)	1.00%
338	Washington County	864,532	856,593	5.8%	0.9%	9.0%	(0.3%)	3.00%	(3.3%)	3.00%
339	Webb County	5,983,906	5,787,769	7.2%	3.8%	3.2%	(1.1%)	3.00%	(4.1%)	3.00%
604	Webb County AD	223,760	225,210	9.4%	4.9%	4.1%	0.2%	2.00%	(1.8%)	2.00%
443	West Central Texas COG	456,220	411,196	25.2%	4.1%	0.4%	(3.4%)	3.00%	(6.4%)	3.00%
410	West Central Texas MWD	95,768	98,584	6.1%	1.6%	4.2%	1.0%	2.00%	(1.0%)	2.00%
454	West Jefferson County MWD	45,248	42,915	6.5%	5.2%	2.5%	(1.7%)	0.00%	(1.7%)	0.00%
688	West Nueces -Las Moras Soil and WCD #236	715	701	(10.1%)	(28.0%)	9.7%	(0.7%)	0.00%	(10.1%)	0.00%
358	West Travis County PUA	60,570	170,164	N/A	N/A	N/A	41.1%	0.00%	41.1%	0.00%
340	Wharton County	761,433	799,783	5.9%	(0.7%)	3.3%	1.7%	3.00%	(1.3%)	3.00%
993	Wharton County CAD	42,792	50,672	N/A	N/A	N/A	5.8%	0.00%	5.8%	0.00%
621	Wharton County WCID #1	7,262	7,633	2.9%	11.5%	4.8%	1.7%	0.00%	1.7%	0.00%
923	Wharton County WCID No. 2	11,081	11,617	N/A	N/A	N/A	1.6%	0.00%	1.6%	0.00%
341	Wheeler County	248,843	245,520	11.6%	6.0%	9.0%	(0.4%)	2.25%	(2.7%)	2.25%
476	Wheeler County AD	9,441	9,854	(7.5%)	5.3%	3.1%	1.4%	0.00%	1.4%	0.00%
427	White River MWD - Dickens County	30,930	35,255	4.2%	5.1%	(5.1%)	4.5%	0.00%	4.5%	0.00%
740	Wichita AD	92,467	85,154	N/A	1.6%	3.7%	(2.7%)	0.00%	(2.7%)	0.00%
342	Wichita County	1,928,958	1,758,186	5.9%	4.3%	3.4%	(3.0%)	3.00%	(6.0%)	3.00%
446	Wichita County WID #2	41,915	36,231	1.0%	2.9%	(3.6%)	(4.7%)	1.50%	(6.2%)	1.50%
559	Wichita-Wilbarger 911 District	25,081	15,072	(1.8%)	(0.5%)	8.3%	(15.6%)	0.00%	(15.6%)	0.00%
655	Wickson Creek SUD - Brazos County	55,726	65,270	2.3%	8.4%	3.1%	5.4%	0.00%	5.4%	0.00%
343	Wilbarger County	303,173	287,683	5.3%	4.3%	1.3%	(1.7%)	3.00%	(4.7%)	3.00%
715	Wilbarger County AD	14,278	12,568	N/A	2.9%	7.1%	(4.2%)	0.00%	(4.2%)	0.00%
530	Wilbarger County HD	635,610	693,408	10.7%	8.1%	(4.5%)	2.9%	2.00%	0.9%	2.00%
344	Willacy County	381,704	351,773	6.0%	11.4%	2.9%	(2.7%)	3.00%	(5.7%)	3.00%
575	Willacy County AD	10,611	16,703	(0.9%)	2.2%	(3.5%)	16.3%	0.00%	16.3%	0.00%
652	Willacy County HA	9,670	11,632	2.1%	(0.7%)	2.1%	6.4%	0.00%	6.4%	0.00%
608	Williamson Central AD	331,261	352,579	3.8%	2.3%	3.8%	2.1%	2.00%	0.1%	2.00%
345	Williamson County	8,130,896	8,523,599	9.8%	3.0%	4.7%	1.6%	3.00%	(1.4%)	3.00%
798	Williamson County ESD #3	97,565	184,746	N/A	N/A	16.8%	23.7%	0.00%	23.7%	0.00%
361	Williamson County ESD #4	92,108	193,376	N/A	N/A	N/A	28.0%	0.00%	28.0%	0.00%
897	Williamson County ESD #5	24,401	57,532	N/A	N/A	N/A	33.1%	0.00%	33.1%	0.00%
1044	Williamson County ESD #7	N/A	26,288	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
346	Wilson County	580,509	639,409	5.2%	2.3%	8.4%	3.3%	3.00%	0.3%	3.00%
479	Wilson County AD	58,286	47,060	14.4%	(0.3%)	6.6%	(6.9%)	0.00%	(6.9%)	0.00%
1023	Wilson County ESD #1	N/A	32,534	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
1017	Wilson County ESD #3	N/A	108,916	N/A	N/A	N/A	N/A	0.00%	0.0%	0.00%
347	Winkler County	648,567	412,504	9.9%	2.8%	3.5%	(14.0%)	2.50%	(16.5%)	2.50%
533	Winkler County AD	9,348	5,925	2.4%	2.7%	5.1%	(14.1%)	0.00%	(14.1%)	0.00%
389	Winkler County HD	N/A	373,216	N/A	N/A	N/A	N/A	2.25%	0.0%	2.25%
937	Wintergarten ECD	11,553	7,830	N/A	N/A	N/A	(12.2%)	0.00%	(12.2%)	0.00%
348	Wise County	1,709,235	1,674,899	12.5%	5.0%	3.2%	(0.7%)	3.00%	(3.7%)	3.00%
493	Wise County AD	79,193	81,028	7.9%	6.3%	4.5%	0.8%	3.00%	(2.2%)	3.00%
349	Wood County	693,649	774,027	6.7%	1.5%	3.5%	3.7%	3.00%	0.7%	3.00%
700	Wood County AD	45,683	40,804	4.2%	(0.7%)	2.9%	(3.7%)	0.00%	(3.7%)	0.00%
991	Wylie Northeast SUD	34,628	36,719	N/A	N/A	N/A	2.0%	0.00%	2.0%	0.00%
350	Yoakum County	1,177,728	1,177,909	11.4%	3.4%	2.4%	0.0%	3.00%	(3.0%)	3.00%
776	Yoakum County AD	11,868	11,515	N/A	N/A	6.3%	(1.0%)	0.00%	(1.0%)	0.00%
351	Young County	349,270	357,925	2.4%	5.5%	2.3%	0.8%	3.00%	(2.2%)	3.00%
352	Zapata County	652,226	686,073	13.4%	(0.7%)	(6.4%)	1.7%	3.00%	(1.3%)	3.00%
649	Zapata County AD	18,489	17,400	4.8%	1.8%	1.5%	(2.0%)	0.00%	(2.0%)	0.00%
935	Zapata Soil and WCD	2,675	2,956	N/A	N/A	N/A	3.4%	0.00%	3.4%	0.00%
353	Zavala County	281,737	264,326	13.7%	1.8%	10.1%	(2.1%)	3.00%	(5.1%)	3.00%
566	Zavala County AD	23,880	24,644	7.5%	3.7%	5.0%	1.1%	1.50%	(0.4%)	1.50%

Appendix B Estimated Impact on Required Contribution Rates – Individual Employers

This appendix provides the estimated impact on the required contribution rates for each employer of the recommended assumptions as if they had been used for the December 31, 2020 actuarial valuation. The estimated change in the required contribution rate is shown for each employer under the proposed assumptions, broken down by the key recommended changes in assumptions. Employers with an estimated change in their required contribution rate of greater than 1.00% of payroll are highlighted.

Cost Increases

An analysis of the five largest increases in employer contribution rates is presented below:

No.	Employer Name	Total Increase	Major Factor
537	Rains County AD	0.28%	Payroll Increase
766	Santo SUD	0.28	Mortality
512	McCulloch County AD	0.32	Mortality
703	Coastal Bend GCD	0.41	Mortality
676	Port of Bay City Authority	0.57	Mortality

Cost Decreases

An analysis of the five largest decreases in employer contribution rates is presented below:

No.	Employer Name	Total Decrease	Major Factor
559	Wichita-Wilbarger 9-1-1 District	2.15%	Mortality
668	Aransas County Nav. Dist.	2.13	Termination Rates
358	West Travis County Public UA	2.07	Termination Rates
485	Clay County AD	2.02	Mortality
612	Rusk County AD	2.00	Termination Rates

Hypothetical Impact of Recommended Assumptions on 2022 Required Employer Contribution Rates

ER Number	Employer Name	12/31/2020					Misc. Assump	Wage/ Payroll Assump	Total Change
		Valuation Results	Retirement	Termination & Refund	Disability	Mortality			
638	Acton MUD	8.93%	-0.09%	-0.26%	0.01%	-0.06%	0.13%	0.02%	-0.25%
789	Agua SUD	5.45%	0.00%	-0.31%	0.00%	0.05%	0.04%	0.01%	-0.21%
615	Alamo Area COG	8.53%	-0.04%	-0.49%	0.01%	-0.13%	0.06%	0.03%	-0.56%
916	Hays Caldwell PUA	8.40%	-0.01%	0.00%	0.02%	-0.01%	0.04%	0.01%	0.05%
100	Anderson County	13.19%	0.00%	-0.50%	0.00%	-0.27%	0.10%	0.02%	-0.65%
691	Anderson County Central AD	7.90%	-0.07%	-0.63%	0.01%	-0.39%	0.14%	0.02%	-0.92%
101	Andrews County	15.88%	-0.04%	-0.42%	0.00%	-0.33%	0.10%	0.03%	-0.66%
875	Andrews County AD	12.96%	-0.03%	0.00%	0.02%	-0.05%	0.07%	0.01%	0.02%
684	Angelina and Nacogdoches Co. WCID #1	8.75%	0.00%	0.00%	0.01%	-0.32%	0.22%	0.00%	-0.09%
102	Angelina County	10.78%	-0.04%	-0.78%	0.00%	-0.15%	0.10%	0.03%	-0.84%
502	Angelina County AD	13.47%	0.01%	-0.74%	0.00%	-0.21%	0.10%	0.04%	-0.80%
576	Angleton DD	10.42%	-0.11%	-0.20%	0.00%	-0.03%	0.15%	0.01%	-0.18%
614	Aquilla WSD - Hill County	8.17%	-0.01%	-0.22%	0.00%	-0.12%	0.09%	0.01%	-0.25%
103	Aransas County	10.07%	-0.02%	-0.57%	0.01%	-0.17%	0.08%	0.02%	-0.65%
459	Aransas County AD	21.38%	-0.08%	-0.14%	0.01%	-0.46%	0.15%	0.01%	-0.51%
668	Aransas County ND	13.64%	-0.02%	-2.08%	0.00%	-0.23%	0.19%	0.01%	-2.13%
104	Archer County	8.01%	-0.01%	-0.19%	0.00%	-0.36%	0.08%	0.02%	-0.46%
503	Archer County AD	22.56%	-0.20%	-0.28%	0.01%	-0.48%	0.15%	0.02%	-0.78%
964	Ark-Tex COG	1.96%	0.00%	-0.08%	0.00%	-0.04%	0.03%	0.00%	-0.09%
105	Armstrong County	7.60%	-0.10%	-0.67%	0.01%	-0.73%	0.16%	0.01%	-1.32%
1011	Armstrong County AD	8.65%	0.00%	0.00%	0.01%	-0.08%	0.03%	0.00%	-0.04%
551	Atascosa County AD	14.73%	0.02%	-0.16%	0.01%	-0.17%	0.11%	0.01%	-0.18%
106	Atascosa County	8.44%	0.02%	-0.51%	0.00%	-0.10%	0.07%	0.03%	-0.49%
950	Athens MWA	6.02%	0.00%	0.00%	0.00%	-0.23%	0.08%	0.00%	-0.15%
107	Austin County	9.15%	-0.03%	-0.62%	0.00%	-0.16%	0.09%	0.02%	-0.70%
461	Austin County AD	16.13%	-0.06%	-0.25%	0.02%	-0.21%	0.15%	0.01%	-0.34%
994	Austin County ECD	11.59%	-0.01%	0.00%	0.02%	-0.02%	0.07%	0.01%	0.07%
597	Bacliff MUD	9.14%	-0.07%	-0.29%	0.00%	0.01%	0.16%	0.01%	-0.18%
108	Bailey County	4.55%	-0.03%	-0.27%	0.00%	-0.31%	0.09%	0.02%	-0.50%
945	Ballinger Memorial HD	5.30%	0.02%	-0.06%	0.00%	-0.04%	0.03%	0.01%	-0.04%
109	Bandera County	11.63%	0.00%	-0.45%	0.00%	-0.15%	0.11%	0.03%	-0.46%
918	Bastrop CAD	10.83%	0.00%	-0.25%	0.00%	-0.05%	0.06%	0.02%	-0.22%
110	Bastrop County	11.97%	-0.03%	-0.52%	0.00%	-0.08%	0.08%	0.04%	-0.51%
812	Bastrop County ESD #1	11.47%	0.00%	-1.65%	0.00%	0.14%	0.04%	0.05%	-1.42%
915	Bastrop County ESD #2	9.55%	0.00%	-1.97%	0.00%	0.06%	0.02%	0.04%	-1.85%
398	Bastrop County WCID #2	10.57%	0.03%	-0.17%	0.01%	0.08%	0.04%	0.02%	0.01%
111	Baylor County	12.43%	-0.03%	-0.74%	0.00%	-0.40%	0.12%	0.02%	-1.03%
685	Baylor County AD	6.63%	-0.02%	-0.02%	0.00%	-0.05%	0.05%	0.02%	-0.02%
613	Bayview ID #11	5.89%	-0.48%	-0.09%	0.02%	-0.19%	0.19%	0.01%	-0.54%
690	Bayview MUD	0.91%	-0.01%	-0.01%	0.00%	-0.05%	0.05%	0.01%	-0.01%
112	Bee County	7.55%	-0.04%	-0.89%	0.00%	-0.17%	0.09%	0.09%	-0.92%
113	Bell County	14.85%	-0.02%	-0.63%	0.01%	-0.14%	0.08%	0.03%	-0.67%
506	Bell County AD	12.39%	-0.05%	-0.24%	0.00%	-0.10%	0.07%	0.02%	-0.30%
418	Bell County WCID #1	6.81%	0.01%	-0.49%	0.00%	-0.08%	0.06%	0.02%	-0.48%
378	Bell County WCID #3	5.23%	0.03%	-0.06%	0.00%	-0.01%	0.04%	0.01%	0.01%
708	Benbrook WA	9.12%	-0.04%	-0.36%	0.01%	0.00%	0.09%	0.02%	-0.28%
472	Bexar AD	16.18%	-0.15%	-0.44%	0.00%	-0.06%	0.13%	0.03%	-0.49%
114	Bexar County	14.44%	-0.01%	-0.41%	0.00%	-0.01%	0.08%	0.03%	-0.32%
1083	Bexar County ESD No. 5	5.94%	0.00%	-0.28%	0.01%	0.08%	0.01%	0.04%	-0.14%
861	Bexar County ESD No.2	9.91%	0.00%	-0.32%	0.00%	0.10%	0.03%	-0.11%	-0.30%
373	Bexar County ESD #10	4.98%	-0.01%	-0.31%	0.00%	0.05%	0.02%	0.02%	-0.23%
1080	Bexar County ESD No. 12	3.90%	0.04%	-0.14%	0.00%	0.04%	0.01%	0.01%	-0.04%
1001	Bexar County ESD #6	7.50%	0.00%	0.00%	0.00%	0.00%	0.02%	0.01%	0.03%
828	Bexar County ESD 7	12.40%	0.01%	-0.93%	0.00%	0.14%	0.03%	0.05%	-0.70%
979	Bexar County ESD #8	9.78%	0.00%	-0.30%	0.01%	0.04%	0.04%	0.03%	-0.18%
544	Bexar County WCID #10	4.50%	-0.02%	-0.20%	0.00%	-0.09%	0.06%	0.00%	-0.25%
716	Bexar Metro 911 Network District	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
737	Bexar-Medina-Atascosa WCID #1	9.83%	-0.02%	-0.24%	0.01%	0.03%	0.08%	0.03%	-0.11%
616	Bistone MWSD - Limestone County	13.71%	-0.02%	-0.37%	0.01%	-0.48%	0.29%	0.04%	-0.53%
115	Blanco County	8.39%	-0.01%	-0.30%	0.00%	-0.28%	0.10%	0.01%	-0.48%
1016	Blanco County ESD No. 2	2.43%	0.00%	-0.16%	0.00%	0.00%	0.01%	0.01%	-0.14%
965	Bluebonnet GCD	3.16%	-0.01%	-0.01%	0.00%	0.05%	0.02%	0.01%	0.06%

ER Number	Employer Name	12/31/2020					Misc. Assump	Wage/ Payroll Assump	Total Change
		Valuation Results	Retirement	Termination & Refund	Disability	Mortality			
116	Borden County	14.78%	-0.07%	-0.41%	0.00%	-0.76%	0.15%	0.02%	-1.07%
525	Borden County AD	9.61%	0.01%	-0.01%	0.01%	-0.14%	0.05%	0.01%	-0.07%
117	Bosque County	6.31%	-0.03%	-0.72%	0.00%	-0.15%	0.07%	0.02%	-0.81%
521	Bosque County Central AD	12.70%	0.00%	-0.29%	0.00%	-0.43%	0.20%	0.03%	-0.49%
118	Bowie County	13.18%	-0.04%	-0.58%	0.01%	-0.37%	0.10%	0.02%	-0.86%
119	Brazoria County	13.01%	-0.03%	-0.44%	0.00%	-0.12%	0.09%	0.03%	-0.47%
508	Brazoria County AD	14.12%	-0.03%	-0.33%	0.01%	-0.15%	0.11%	0.02%	-0.37%
413	Brazoria County CRD #3	18.63%	-0.04%	-0.06%	0.00%	0.04%	0.16%	0.02%	0.12%
424	Brazoria County DD #4	12.18%	0.02%	-0.37%	0.02%	0.00%	0.10%	0.03%	-0.20%
681	Brazoria County DD #5	4.45%	-0.02%	-0.16%	0.00%	-0.12%	0.06%	-0.02%	-0.26%
1050	Brazoria County ESD No. 3	10.11%	0.00%	-0.30%	0.02%	0.02%	0.03%	0.03%	-0.20%
689	Brazos Central AD	17.99%	0.01%	-0.38%	0.00%	-0.03%	0.12%	0.03%	-0.25%
120	Brazos County	15.21%	-0.03%	-0.60%	0.00%	-0.05%	0.10%	0.03%	-0.55%
600	Brazos County ECD	11.91%	-0.05%	-0.40%	0.00%	0.11%	0.06%	0.04%	-0.24%
849	Brazos Regional PUA	9.15%	-0.07%	-0.23%	0.00%	-0.05%	0.07%	0.02%	-0.26%
744	Brazos River Auth.	9.32%	-0.04%	-0.32%	0.01%	-0.02%	0.07%	0.02%	-0.28%
967	Brazos Transit District	2.39%	-0.01%	-0.11%	0.01%	-0.11%	0.03%	0.01%	-0.18%
806	Brazos Valley COG	7.06%	-0.03%	-0.54%	0.01%	-0.06%	0.04%	0.01%	-0.57%
809	Brazos Valley ECD	14.95%	0.02%	0.00%	0.01%	-0.30%	0.17%	0.00%	-0.10%
121	Brewster County	10.64%	-0.03%	-0.53%	0.01%	-0.17%	0.10%	0.02%	-0.60%
581	Brewster County AD	7.80%	-0.05%	-0.22%	0.00%	0.13%	0.04%	0.04%	-0.06%
745	Bright Star-Salem SUD	7.23%	-0.02%	0.00%	0.01%	0.10%	0.04%	0.01%	0.14%
122	Briscoe County	8.93%	-0.05%	-0.25%	0.02%	-0.50%	0.17%	0.00%	-0.61%
1052	Brookeland FWSD	6.67%	0.00%	0.00%	0.01%	0.04%	0.03%	0.01%	0.09%
876	Brookesmith SUD	2.79%	-0.03%	-0.10%	0.01%	0.02%	0.03%	0.01%	-0.06%
123	Brooks County	3.79%	-0.02%	-0.48%	0.00%	-0.26%	0.06%	0.01%	-0.69%
554	Brookshire - Katy DD	8.48%	0.00%	-0.19%	0.02%	-0.32%	0.02%	0.01%	-0.40%
522	Brookshire MWD	5.75%	-0.29%	0.00%	0.01%	0.20%	0.13%	0.01%	0.06%
124	Brown County	8.54%	-0.02%	-0.34%	0.00%	-0.14%	0.07%	0.02%	-0.41%
702	Brownsville ID	5.06%	-0.05%	-0.17%	0.00%	0.03%	0.10%	0.01%	-0.08%
1055	Brush Country GCD	7.15%	0.01%	0.00%	0.01%	-0.18%	0.09%	0.00%	-0.08%
642	Brushy Creek MUD - Williamson County	8.59%	-0.04%	-0.68%	0.01%	-0.03%	0.07%	0.02%	-0.65%
125	Burleson County	6.90%	-0.04%	-0.36%	0.00%	-0.15%	0.07%	0.02%	-0.46%
978	Burleson County AD	8.05%	-0.02%	-0.14%	0.00%	0.00%	0.04%	0.02%	-0.10%
609	Burnet Central AD	15.90%	-0.03%	-0.29%	0.02%	-0.25%	0.17%	0.03%	-0.36%
126	Burnet County	11.73%	0.00%	-0.48%	0.00%	-0.11%	0.07%	0.04%	-0.48%
127	Caldwell County	6.02%	-0.02%	-0.35%	0.01%	-0.08%	0.05%	0.02%	-0.37%
718	Caldwell County AD	11.32%	-0.03%	-0.28%	0.00%	0.04%	0.06%	0.03%	-0.18%
128	Calhoun County	12.43%	-0.03%	-0.36%	0.01%	-0.27%	0.11%	0.03%	-0.51%
709	Calhoun County AD	14.33%	-0.09%	-0.25%	0.02%	-0.07%	0.14%	0.02%	-0.23%
788	Calhoun County E911 ECD	14.37%	0.02%	0.00%	0.00%	0.07%	0.06%	0.02%	0.17%
129	Callahan County	4.95%	-0.03%	-0.17%	0.01%	-0.40%	0.10%	0.01%	-0.48%
542	Callahan County AD	6.97%	-0.01%	-0.06%	0.00%	-0.15%	0.06%	0.01%	-0.15%
130	Cameron County	12.15%	-0.05%	-0.51%	0.01%	-0.01%	0.09%	0.04%	-0.43%
618	Cameron County AD	13.07%	0.01%	-0.36%	0.01%	0.00%	0.09%	0.03%	-0.22%
692	Cameron County DD #1	5.03%	0.02%	-0.12%	0.01%	-0.20%	0.14%	0.00%	-0.15%
664	Cameron County DD #3	2.04%	-0.01%	-0.09%	0.00%	-0.06%	0.07%	0.01%	-0.08%
686	Cameron County DD #5	11.01%	-0.01%	0.00%	0.00%	-0.15%	0.20%	0.01%	0.05%
851	Cameron County ECD	15.72%	0.01%	0.01%	0.00%	-0.21%	0.15%	0.01%	-0.03%
462	Cameron County ID #2	4.71%	-0.08%	-0.20%	0.00%	-0.17%	0.10%	0.02%	-0.33%
590	Cameron County ID #6	7.69%	-0.05%	-0.21%	0.00%	-0.38%	0.12%	0.00%	-0.52%
900	Cameron County RMA	10.82%	-0.04%	-1.91%	0.00%	0.07%	0.05%	0.04%	-1.79%
670	Camp Central AD	8.92%	0.05%	-0.09%	0.00%	-0.09%	0.08%	0.01%	-0.04%
131	Camp County	11.88%	-0.02%	-0.36%	0.01%	-0.49%	0.14%	0.02%	-0.69%
367	Caney Creek MUD	4.55%	0.02%	-0.14%	0.00%	-0.06%	0.05%	0.01%	-0.12%
379	Canyon Lake CLD	3.22%	0.02%	-0.07%	0.00%	-0.05%	0.03%	0.00%	-0.07%
1021	Canyon Regional Water Authority	9.43%	0.05%	-0.27%	0.01%	0.04%	0.03%	0.02%	-0.12%
132	Carson County	11.01%	0.00%	-0.41%	0.00%	-0.43%	0.15%	0.02%	-0.67%
133	Cass County	11.20%	-0.01%	-0.37%	0.01%	-0.32%	0.11%	0.02%	-0.57%
610	Cass County AD	9.03%	-0.03%	-0.17%	0.00%	-0.44%	0.09%	0.01%	-0.54%
134	Castro County	12.56%	-0.02%	-0.89%	0.00%	-0.46%	0.14%	0.02%	-1.21%
719	Central AD of Bandera County	8.92%	-0.13%	-0.22%	0.00%	0.08%	0.09%	0.02%	-0.16%
635	Central AD of Johnson County	14.11%	-0.04%	-0.29%	0.00%	-0.12%	0.13%	0.02%	-0.30%
602	Central AD of Taylor County	10.87%	-0.06%	-0.27%	0.01%	-0.16%	0.12%	0.01%	-0.35%
862	Central Texas ECD	12.14%	0.02%	0.00%	0.00%	0.05%	0.06%	0.01%	0.14%
712	Central Texas RMA	14.54%	-0.09%	-1.90%	0.00%	-0.14%	0.18%	-0.04%	-1.99%

ER Number	Employer Name	12/31/2020					Misc. Assump	Wage/ Payroll Assump	Total Change
		Valuation Results	Retirement	Termination & Refund	Disability	Mortality			
648	Central WCID - Angelina County	5.95%	-0.01%	0.00%	0.00%	0.14%	0.07%	0.01%	0.21%
135	Chambers County	12.82%	-0.01%	-0.48%	0.01%	-0.17%	0.09%	0.03%	-0.53%
531	Chambers County AD	11.62%	0.00%	-0.25%	0.00%	-0.12%	0.09%	0.05%	-0.23%
548	Chambers County Public HD	7.85%	-0.01%	-0.28%	0.02%	-0.01%	0.05%	0.03%	-0.20%
136	Cherokee County	8.62%	0.01%	-0.32%	0.01%	-0.29%	0.06%	0.02%	-0.51%
137	Childress County	2.13%	-0.01%	-0.27%	0.00%	-0.04%	0.04%	0.02%	-0.26%
511	Childress County AD	4.32%	-0.01%	0.00%	0.00%	-0.62%	0.07%	0.00%	-0.56%
582	Childress County HD	6.69%	-0.02%	-0.23%	0.00%	-0.01%	0.05%	0.02%	-0.19%
138	Clay County	9.04%	-0.12%	-0.35%	0.02%	-0.46%	0.13%	0.02%	-0.76%
485	Clay County AD	36.21%	-0.14%	0.35%	0.00%	-2.37%	0.17%	-0.02%	-2.02%
703	Coastal Bend ECD	9.64%	0.02%	0.01%	0.00%	0.32%	0.05%	0.01%	0.41%
722	Coastal Plains ECD	14.88%	0.02%	0.00%	0.01%	-0.11%	0.09%	0.01%	0.02%
139	Cochran County	7.49%	-0.03%	-0.54%	0.00%	-0.34%	0.11%	0.02%	-0.78%
477	Cochran County AD	0.57%	-0.12%	-0.12%	0.02%	-0.18%	0.13%	0.02%	-0.25%
751	Coke County AD	11.71%	-0.02%	0.00%	-0.01%	-0.61%	0.22%	0.00%	-0.42%
140	Coke County	14.93%	-0.03%	-0.29%	0.00%	-0.84%	0.17%	0.01%	-0.98%
946	Coke County Soil and WCD #219	3.40%	0.00%	0.00%	0.00%	-0.03%	0.02%	0.00%	-0.01%
141	Coleman County	6.17%	-0.06%	-0.18%	0.00%	-0.47%	0.11%	0.01%	-0.59%
142	Collin County	9.86%	-0.04%	-0.66%	0.00%	-0.08%	0.03%	0.03%	-0.66%
457	Collin County Central AD	11.61%	-0.03%	-0.36%	0.00%	-0.17%	0.10%	0.03%	-0.43%
143	Collingsworth County	11.81%	0.01%	-0.38%	0.00%	-0.39%	0.15%	0.01%	-0.60%
961	Collingsworth County AD	10.95%	-0.01%	-0.01%	0.01%	-0.32%	0.14%	0.00%	-0.19%
144	Colorado County	10.80%	-0.03%	-0.49%	0.00%	-0.24%	0.12%	0.03%	-0.61%
623	Comal AD	15.01%	0.05%	-0.33%	0.00%	-0.01%	0.06%	0.05%	-0.18%
145	Comal County	12.10%	-0.02%	-0.52%	0.00%	-0.04%	0.07%	0.04%	-0.47%
775	Comal County ESD #3	10.40%	0.01%	-0.54%	0.00%	0.18%	0.04%	-0.07%	-0.38%
996	Comanche CAD	10.48%	0.03%	-0.12%	0.00%	-0.14%	0.06%	0.01%	-0.16%
146	Comanche County	11.06%	0.00%	-0.38%	0.02%	-0.26%	0.08%	0.01%	-0.54%
762	Combined Consumers SUD	12.13%	-0.02%	-0.26%	0.00%	0.10%	0.08%	0.03%	-0.07%
366	Concho County AD	12.02%	-0.01%	0.00%	0.01%	-0.14%	0.07%	0.00%	-0.07%
147	Concho County	10.02%	-0.01%	-0.48%	0.00%	-0.25%	0.11%	0.02%	-0.61%
636	Concho County HD	4.20%	-0.01%	-0.12%	0.00%	-0.04%	0.02%	-0.03%	-0.18%
759	Concho Valley COG	11.97%	0.00%	-1.04%	0.01%	-0.09%	0.06%	0.03%	-1.03%
148	Cooke County	9.94%	-0.04%	-0.58%	0.00%	-0.13%	0.09%	0.03%	-0.63%
487	Cooke County AD	16.80%	-0.04%	-0.41%	0.00%	-0.36%	0.12%	0.03%	-0.66%
149	Coryell County	11.31%	-0.03%	-0.34%	0.02%	-0.21%	0.10%	0.04%	-0.42%
150	Cottle County	2.53%	-0.04%	-0.19%	0.00%	-0.41%	0.08%	0.02%	-0.54%
727	Cow Creek ECD	8.75%	-0.03%	0.00%	0.00%	0.16%	0.06%	0.01%	0.20%
151	Crane County	16.89%	-0.02%	-0.70%	0.00%	-0.50%	0.12%	0.03%	-1.06%
392	Crane County AD	11.23%	-0.09%	0.00%	0.01%	0.03%	0.05%	0.00%	0.00%
757	Crane County HD	11.21%	0.00%	-0.67%	0.02%	-0.01%	0.06%	0.02%	-0.58%
152	Crockett County	9.66%	-0.04%	-0.44%	0.00%	-0.32%	0.10%	0.02%	-0.69%
907	Crockett County AD	10.11%	-0.01%	0.00%	0.01%	-0.09%	0.06%	0.01%	-0.02%
409	Crockett County WCID #1	4.07%	-0.03%	-0.26%	0.01%	-0.19%	0.14%	0.02%	-0.31%
153	Crosby County	7.48%	-0.06%	-0.39%	0.01%	-0.56%	0.10%	0.05%	-0.85%
532	Crosby County AD	3.23%	-0.03%	-0.38%	0.00%	-0.20%	0.04%	-0.80%	-1.37%
603	Crosby MUD	8.39%	-0.12%	-0.28%	0.00%	0.12%	0.10%	0.02%	-0.16%
710	Cross Roads SUD	3.55%	0.00%	-0.01%	0.01%	-0.21%	0.07%	0.00%	-0.14%
902	Crysal Clear SUD	3.60%	-0.02%	-0.24%	0.00%	0.01%	0.03%	0.01%	-0.21%
154	Culberson County	9.18%	-0.01%	-0.34%	0.02%	-0.14%	0.09%	0.02%	-0.36%
1000	Cypress Springs SUD	16.05%	-0.01%	-0.34%	0.00%	0.01%	0.07%	0.02%	-0.25%
155	Dallam County	16.66%	-0.03%	-0.55%	0.00%	-0.46%	0.11%	0.05%	-0.88%
771	Dallam County AD	9.62%	-0.06%	0.00%	0.01%	0.01%	0.06%	0.01%	0.03%
467	Dallas Central AD	21.19%	-0.02%	-0.64%	0.00%	-0.29%	0.18%	0.04%	-0.73%
156	Dallas County	13.93%	-0.06%	-0.55%	0.01%	-0.16%	0.10%	0.03%	-0.63%
430	Dallas County Park Cities MUD	11.14%	-0.01%	-0.36%	0.00%	-0.23%	0.17%	0.03%	-0.40%
157	Dawson County	7.43%	-0.05%	-0.46%	0.00%	-0.26%	0.09%	0.02%	-0.66%
463	Dawson County Central AD	11.35%	-0.16%	-0.35%	0.00%	-0.09%	0.13%	0.02%	-0.45%
158	Deaf Smith County	11.79%	-0.05%	-0.37%	0.00%	-0.23%	0.10%	0.02%	-0.53%
578	Deaf Smith County HD	3.97%	0.00%	-0.21%	0.00%	-0.07%	0.03%	0.01%	-0.24%
363	Deep East Texas COG	8.04%	-0.02%	-0.21%	0.00%	-0.07%	0.06%	0.02%	-0.22%
159	Delta County	5.17%	-0.03%	-0.34%	0.01%	-0.27%	0.08%	0.02%	-0.53%
855	Delta County AD	8.78%	0.02%	0.00%	0.01%	-0.08%	0.06%	0.00%	0.01%
734	Delta County MUD	4.99%	0.01%	0.00%	0.00%	-0.07%	0.10%	0.00%	0.04%
732	Delta Lake ID	4.36%	-0.01%	-0.15%	0.00%	-0.11%	0.07%	-0.01%	-0.21%
583	Denco Area 911 District - Denton County	10.24%	-0.29%	-0.23%	0.01%	0.08%	0.17%	0.02%	-0.24%

ER Number	Employer Name	12/31/2020					Misc. Assump	Wage/ Payroll Assump	Total Change
		Valuation Results	Retirement	Termination & Refund	Disability	Mortality			
482	Denton Central AD	12.70%	-0.02%	-0.39%	0.00%	0.05%	0.10%	0.04%	-0.22%
160	Denton County	14.62%	0.00%	-0.56%	0.01%	-0.01%	0.08%	0.04%	-0.44%
1005	Denton County FWSD #10	10.59%	0.02%	-0.20%	0.00%	0.08%	0.04%	0.03%	-0.03%
758	Denton County FWSD 1A	9.42%	-0.01%	-0.68%	0.01%	-0.12%	0.12%	0.01%	-0.67%
783	Denton County Transportation Auth.	7.76%	0.00%	-0.13%	0.00%	-0.01%	0.05%	-0.05%	-0.14%
161	DeWitt County	5.65%	-0.01%	-0.24%	0.00%	-0.20%	0.09%	0.02%	-0.34%
466	DeWitt County AD	11.07%	-0.24%	-0.29%	0.02%	-0.11%	0.17%	0.01%	-0.44%
162	Dickens County	9.73%	-0.01%	-0.25%	0.00%	-0.49%	0.10%	0.02%	-0.63%
764	Dickens County AD	10.76%	0.04%	0.00%	0.01%	-0.20%	0.12%	0.00%	-0.03%
163	Dimmit County	8.21%	0.02%	-0.70%	0.00%	-0.08%	0.08%	0.05%	-0.63%
164	Donley County	6.11%	-0.02%	-0.20%	0.01%	-0.36%	0.12%	0.00%	-0.45%
165	Duval County	6.93%	-0.06%	-0.43%	0.01%	-0.40%	0.13%	0.01%	-0.73%
929	Duval County AD	10.04%	-0.04%	-0.03%	0.01%	-0.33%	0.13%	0.00%	-0.26%
880	Duval County ECD	9.48%	0.01%	0.00%	0.01%	-0.37%	0.15%	0.00%	-0.20%
1062	East Central SUD	9.01%	-0.03%	-0.37%	0.00%	0.01%	0.03%	0.02%	-0.34%
879	East Fork SUD	14.32%	0.01%	-0.21%	-0.01%	-0.13%	0.14%	0.01%	-0.19%
376	East Harris County ESJPB	9.29%	-0.01%	-0.35%	0.00%	0.01%	0.04%	0.03%	-0.28%
825	East Medina County SUD	9.16%	-0.02%	-0.26%	0.01%	-0.02%	0.06%	0.02%	-0.21%
166	Eastland County	13.63%	0.02%	-0.48%	0.01%	-0.36%	0.09%	0.04%	-0.68%
593	Eastland County AD	15.25%	-0.01%	0.07%	0.01%	-0.60%	0.09%	0.04%	-0.40%
167	Ector County	17.10%	-0.04%	-0.69%	0.00%	-0.27%	0.09%	0.06%	-0.85%
939	Ector County AD	10.77%	-0.01%	-0.24%	0.00%	-0.04%	0.05%	0.04%	-0.20%
580	Ector County HD	9.00%	-0.06%	-0.39%	0.00%	-0.01%	0.06%	0.03%	-0.37%
448	Edwards Aquifer Auth. - Bexar County	11.09%	-0.02%	-0.30%	0.00%	0.00%	0.09%	-0.31%	-0.54%
628	Edwards Central AD	4.27%	0.00%	0.00%	0.00%	-0.09%	0.04%	0.02%	-0.03%
168	Edwards County	10.00%	-0.01%	-0.80%	0.02%	-0.22%	0.10%	0.03%	-0.88%
819	El Paso Central AD	11.48%	-0.06%	-0.38%	0.02%	-0.05%	0.09%	0.03%	-0.35%
170	El Paso County	18.63%	0.00%	-0.47%	0.01%	0.07%	0.10%	0.04%	-0.25%
567	El Paso County 911 District	16.61%	-0.01%	-0.05%	0.01%	-0.32%	0.12%	0.02%	-0.23%
1013	El Paso County ESD #1	11.01%	0.08%	-0.24%	0.01%	-0.04%	0.05%	0.02%	-0.12%
936	El Paso County ESD #2	11.82%	0.03%	-0.58%	0.00%	0.03%	0.06%	0.03%	-0.43%
541	El Paso County HD	8.21%	-0.01%	-0.43%	0.00%	-0.01%	0.04%	0.03%	-0.38%
1004	El Paso County WCID No. 1	4.15%	0.01%	-0.18%	0.00%	0.02%	0.02%	0.02%	-0.11%
963	El Paso MH&MR	5.18%	-0.01%	-0.21%	0.00%	0.00%	0.03%	0.02%	-0.17%
395	Electra HA	11.61%	-0.03%	-0.01%	0.00%	-0.06%	0.05%	0.00%	-0.05%
976	Ellis Appraisal District	16.33%	-0.05%	-0.23%	0.02%	0.03%	0.09%	0.03%	-0.11%
169	Ellis County	11.97%	0.00%	-0.51%	0.00%	-0.06%	0.10%	0.03%	-0.44%
859	Emerald Bay MUD	1.30%	-0.05%	-0.03%	0.02%	-0.02%	0.02%	0.01%	-0.05%
624	ECD of Ector County	8.66%	-0.01%	-0.02%	0.01%	-0.23%	0.19%	0.01%	-0.05%
171	Erath County	8.68%	-0.01%	-0.50%	0.01%	-0.18%	0.09%	0.03%	-0.56%
850	Erath County AD	16.08%	-0.02%	-0.41%	0.00%	-0.14%	0.12%	0.03%	-0.42%
172	Falls County	11.33%	-0.03%	-0.47%	0.01%	-0.21%	0.06%	0.02%	-0.62%
563	Falls County AD	10.51%	-0.03%	-0.16%	0.01%	-0.21%	0.06%	0.02%	-0.31%
644	Fannin County AD	11.54%	0.02%	-0.42%	0.01%	0.06%	0.06%	0.04%	-0.23%
173	Fannin County	11.76%	-0.01%	-0.77%	0.00%	-0.20%	0.11%	0.02%	-0.85%
174	Fayette County	14.92%	-0.03%	-0.35%	0.00%	-0.15%	0.10%	0.02%	-0.41%
951	Fern Bluff MUD	11.95%	0.08%	0.00%	0.01%	-0.12%	0.08%	0.00%	0.05%
175	Fisher County	7.46%	-0.02%	-0.37%	0.00%	-0.44%	0.06%	0.02%	-0.75%
432	Fisher County HD	3.69%	-0.02%	-0.12%	0.00%	-0.11%	0.05%	0.01%	-0.19%
176	Floyd County	9.09%	-0.04%	-0.40%	0.00%	-0.31%	0.12%	0.02%	-0.61%
360	Foard County	6.87%	0.04%	-0.18%	0.00%	-0.15%	0.09%	0.01%	-0.19%
474	Fort Bend Central AD	14.51%	-0.01%	-0.41%	0.01%	-0.23%	0.09%	0.03%	-0.52%
178	Fort Bend County	13.45%	-0.02%	-0.37%	0.00%	-0.02%	0.08%	0.03%	-0.30%
390	Fort Bend County ESD #4	8.85%	-0.02%	-0.57%	0.00%	0.07%	0.06%	0.03%	-0.43%
1063	Fort Bend County ESD No. 7	6.85%	0.02%	-0.35%	0.00%	0.06%	0.01%	0.04%	-0.22%
974	Fort Bend County ESD #2	10.46%	-0.04%	-0.37%	0.01%	0.06%	0.05%	0.03%	-0.26%
782	Fort Bend County WCID #2	9.93%	-0.03%	-0.29%	0.00%	0.00%	0.07%	0.01%	-0.24%
932	Fort Clark MUD	5.13%	-0.01%	-0.08%	0.00%	0.03%	0.04%	0.01%	-0.01%
860	Fort Griffin SUD	3.03%	-0.01%	-0.01%	0.00%	0.01%	0.02%	0.02%	0.03%
769	Four Way SUD	6.02%	-0.01%	0.00%	0.02%	0.07%	0.04%	0.01%	0.13%
179	Franklin County	11.02%	-0.01%	-0.45%	0.00%	-0.21%	0.10%	0.03%	-0.54%
1038	Freer WCID	14.69%	-0.04%	-0.28%	0.00%	0.08%	0.05%	0.01%	-0.18%
180	Freestone County	17.53%	-0.02%	-0.29%	0.00%	-0.49%	0.14%	0.01%	-0.66%
693	Freestone County AD	14.57%	0.00%	-0.46%	0.00%	-0.46%	0.16%	0.03%	-0.27%
181	Frio County	11.31%	-0.05%	-0.85%	0.00%	-0.17%	0.09%	0.04%	-0.94%
509	Frio County AD	19.70%	-0.01%	-0.31%	0.00%	-0.69%	0.13%	0.02%	-0.86%

ER Number	Employer Name	12/31/2020					Misc. Assump	Wage/ Payroll Assump	Total Change
		Valuation Results	Retirement	Termination & Refund	Disability	Mortality			
182	Gaines County	8.32%	-0.01%	-0.24%	0.00%	-0.34%	0.10%	0.02%	-0.47%
761	Gaines County AD	8.45%	-0.09%	-0.22%	0.00%	-0.09%	0.04%	0.02%	-0.34%
546	Galveston Central AD	24.01%	-0.03%	-0.48%	0.00%	-0.67%	0.22%	0.03%	-0.93%
183	Galveston County	13.01%	-0.05%	-0.92%	0.00%	-0.17%	0.09%	0.04%	-1.01%
547	Galveston County Consolidated DD	16.50%	-0.04%	0.04%	0.00%	-0.18%	0.25%	0.01%	0.08%
464	Galveston County DD #1	12.35%	-0.03%	-0.34%	0.00%	-0.22%	0.11%	0.03%	-0.45%
433	Galveston County DD #2	20.62%	-0.11%	-0.36%	0.00%	0.29%	0.19%	0.03%	0.04%
589	Galveston County ECD	16.71%	-0.02%	-0.19%	0.00%	-0.20%	0.26%	0.02%	-0.13%
821	Galveston County FWSD #6	5.92%	-0.02%	-0.09%	0.00%	-0.17%	0.14%	0.01%	-0.13%
752	Galveston County Health District	3.77%	-0.03%	-0.44%	0.00%	0.00%	0.03%	0.02%	-0.42%
1020	Galveston County WCID No. 8	11.99%	-0.01%	-0.35%	0.00%	0.10%	0.04%	0.04%	-0.18%
407	Galveston County WCID #1	13.86%	-0.11%	-0.50%	0.00%	-0.02%	0.17%	0.04%	-0.42%
473	Garza Central AD	15.52%	-0.09%	-0.30%	0.01%	-0.65%	0.11%	0.02%	-0.90%
184	Garza County	7.25%	-0.01%	-0.65%	0.00%	-0.20%	0.12%	0.02%	-0.72%
908	Garza County HCD	13.51%	-0.05%	0.00%	0.01%	0.08%	0.05%	0.00%	0.09%
885	Gillespie Central AD	11.54%	0.02%	-0.25%	0.00%	0.01%	0.06%	0.03%	-0.13%
185	Gillespie County	11.76%	-0.03%	-0.42%	0.00%	-0.17%	0.12%	0.03%	-0.47%
955	Gillespie County Soil and WCD	6.68%	0.01%	0.00%	0.00%	-0.08%	0.04%	0.00%	-0.03%
186	Glasscock County	10.71%	0.05%	-0.43%	0.00%	-0.51%	0.10%	0.03%	-0.76%
942	Glasscock County AD	12.42%	0.00%	0.00%	0.01%	0.01%	0.03%	0.02%	0.07%
187	Goliad County	6.37%	-0.02%	-0.58%	0.00%	-0.28%	0.09%	0.02%	-0.77%
498	Gonzales County AD	15.49%	-0.04%	-0.37%	0.01%	-0.29%	0.18%	0.02%	-0.49%
188	Gonzales County	15.33%	0.02%	-0.55%	0.01%	-0.12%	0.08%	0.04%	-0.52%
886	Graham RMC	2.66%	0.00%	-0.14%	0.00%	0.01%	0.02%	0.01%	-0.10%
189	Gray County	8.53%	-0.06%	-0.81%	0.01%	-0.37%	0.09%	0.03%	-1.11%
518	Gray County AD	16.66%	-0.06%	-0.33%	0.01%	-0.38%	0.10%	0.38%	-0.28%
475	Grayson Central AD	14.30%	0.01%	-0.39%	0.01%	-0.16%	0.12%	0.03%	-0.38%
190	Grayson County	9.55%	-0.03%	-0.33%	0.00%	-0.11%	0.06%	0.02%	-0.39%
528	Greater Harris Co. 911 Emerg. Network	15.76%	-0.01%	-0.34%	0.00%	0.06%	0.15%	0.03%	-0.11%
429	Greenbelt MIWA - Donley County	10.34%	-0.03%	-0.30%	0.00%	-0.29%	0.23%	0.01%	-0.38%
191	Gregg County	12.20%	-0.04%	-0.47%	0.00%	-0.18%	0.09%	0.04%	-0.56%
192	Grimes County	10.16%	0.00%	-0.47%	0.00%	-0.16%	0.09%	0.02%	-0.52%
483	Grimes County AD	13.43%	-0.08%	-0.28%	0.00%	-0.47%	0.19%	0.01%	-0.63%
587	Guadalupe AD	14.17%	-0.01%	0.08%	0.00%	-0.01%	0.13%	0.01%	0.20%
193	Guadalupe County	11.83%	0.00%	-0.41%	0.00%	-0.03%	0.08%	0.04%	-0.32%
380	Guadalupe County GCD	8.77%	0.01%	0.00%	0.01%	-0.07%	0.03%	0.02%	0.00%
388	Guadalupe-Blanco River Authority	10.11%	-0.03%	-0.37%	0.00%	0.00%	0.05%	0.03%	-0.32%
526	Gulf Coast WA - Galveston County	10.10%	-0.08%	-0.20%	0.00%	-0.14%	0.11%	-0.31%	-0.62%
194	Hale County	16.42%	-0.02%	-0.47%	0.00%	-0.30%	0.09%	0.30%	-0.41%
195	Hall County	10.82%	-0.02%	-0.60%	0.01%	-0.65%	0.14%	0.01%	-1.11%
787	Hall County AD	3.47%	0.00%	0.00%	0.00%	-0.04%	0.03%	0.00%	-0.01%
196	Hamilton County	7.22%	0.00%	-0.57%	0.00%	-0.16%	0.07%	0.02%	-0.64%
1071	Hamilton County AD	10.43%	0.01%	0.00%	0.00%	0.03%	0.03%	0.01%	0.08%
197	Hansford County	10.82%	-0.01%	-0.33%	0.00%	-0.54%	0.15%	0.01%	-0.72%
585	Hansford County HD	5.25%	0.00%	-0.17%	0.00%	-0.03%	0.03%	0.02%	-0.15%
198	Hardeman County	5.22%	-0.03%	-0.67%	0.02%	-0.34%	0.08%	0.02%	-0.92%
199	Hardin County	13.47%	0.00%	-0.76%	0.00%	-0.26%	0.10%	0.02%	-0.91%
527	Hardin County AD	11.20%	-0.04%	-0.45%	0.02%	-0.82%	0.08%	0.04%	-1.17%
887	Hardin County ESD # 2	6.77%	0.04%	-0.39%	0.00%	0.00%	0.04%	0.03%	-0.28%
571	Harlingen ID Cameron County #1	3.59%	-0.04%	-0.16%	0.00%	-0.12%	0.12%	0.00%	-0.20%
200	Harris County	15.70%	-0.02%	-0.43%	0.00%	-0.05%	0.09%	0.03%	-0.38%
598	Harris County AD	14.68%	-0.02%	-0.49%	0.00%	-0.14%	0.10%	0.05%	-0.50%
382	Harris County ESD #24	10.47%	0.03%	-0.33%	0.00%	0.10%	0.03%	0.04%	-0.13%
888	Hardin County ESD # 29	6.63%	0.00%	-0.12%	0.00%	0.05%	0.05%	0.03%	0.01%
944	Harris County ESD #48	7.11%	0.00%	-0.19%	0.01%	0.04%	0.04%	-0.06%	-0.16%
835	Harris County ESD #50	9.66%	0.03%	-0.24%	0.00%	0.14%	0.04%	-0.03%	-0.06%
1064	Harris County ESD No. 7	12.58%	0.04%	-0.43%	0.01%	0.08%	0.03%	0.04%	-0.23%
374	Harris County ESD #10	9.40%	-0.01%	-0.38%	0.00%	0.07%	0.03%	0.03%	-0.26%
985	Harris County ESD #12	12.12%	0.00%	-0.81%	0.00%	0.05%	0.05%	0.03%	-0.68%
975	Harris County ESD #17	9.26%	0.01%	-0.67%	0.00%	0.07%	0.03%	0.04%	-0.52%
988	Harris County ESD #9	11.10%	-0.02%	-1.88%	0.00%	0.01%	0.04%	0.00%	-1.85%
842	Harris County ESD #13	11.45%	-0.02%	-1.54%	0.01%	0.09%	0.05%	0.03%	-1.38%
948	Harris County ESD No. 46	8.30%	-0.02%	-1.88%	0.00%	0.03%	0.03%	-0.02%	-1.86%
364	Harris County FWSD 61	8.79%	-0.02%	-0.30%	0.00%	0.06%	0.04%	0.03%	-0.19%
797	Harris County HA	10.16%	0.05%	-0.48%	0.02%	-0.10%	0.09%	0.03%	-0.39%
903	Harris County S&CC	10.27%	-0.05%	-0.32%	0.00%	0.02%	0.05%	0.03%	-0.27%

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		Valuation Results	Retirement	Termination & Refund	Disability	Mortality			
569	Harris County WCID #1	10.10%	-0.07%	-0.37%	0.00%	-0.11%	0.09%	0.03%	-0.43%
877	Harris County WCID #36	10.28%	0.04%	-0.25%	0.00%	-0.05%	0.12%	0.03%	-0.11%
625	Harris County WCID #50	4.52%	0.01%	-0.03%	0.00%	-0.10%	0.12%	0.00%	0.00%
201	Harrison County	11.42%	-0.05%	-0.74%	0.01%	-0.22%	0.10%	0.02%	-0.88%
202	Hartley County	13.40%	-0.03%	-0.25%	0.01%	-0.46%	0.14%	0.02%	-0.57%
520	Hartley County AD	10.16%	0.01%	-0.28%	0.01%	-0.24%	0.11%	0.04%	-0.35%
203	Haskell County	8.55%	-0.05%	-0.23%	0.01%	-0.53%	0.13%	0.01%	-0.66%
552	Haskell Memorial HD	3.76%	0.00%	-0.24%	0.00%	-0.10%	0.04%	0.01%	-0.29%
204	Hays County	14.38%	-0.04%	-0.64%	0.01%	0.03%	0.07%	0.05%	-0.52%
878	Hays County ESD #5	13.54%	0.01%	-0.64%	0.01%	0.14%	0.04%	0.07%	-0.37%
799	Hays County ESD #6	10.27%	0.02%	-0.39%	0.00%	0.16%	0.04%	0.05%	-0.12%
826	Hays County ESD #8	12.57%	0.02%	-0.35%	0.00%	0.14%	0.05%	0.04%	-0.10%
943	Heart of Texas COG	8.26%	-0.02%	-0.24%	0.00%	-0.06%	0.06%	0.02%	-0.24%
205	Hemphill County	1.49%	-0.06%	-0.53%	0.01%	-0.42%	0.11%	0.02%	-0.87%
640	Hemphill County AD	11.67%	-0.10%	-0.01%	0.00%	-0.25%	0.19%	0.01%	-0.16%
529	Hemphill County HD	11.38%	-0.03%	-0.59%	0.01%	-0.08%	0.07%	-0.13%	-0.75%
839	Hemphill County Underground WCD	3.56%	0.00%	0.00%	0.00%	-0.03%	0.03%	0.01%	0.01%
206	Henderson County	14.52%	0.01%	-0.50%	0.00%	-0.10%	0.08%	0.04%	-0.47%
746	Henderson County 911 CD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
704	Henderson County AD	18.01%	-0.01%	0.17%	0.00%	-0.09%	0.13%	0.03%	0.23%
1073	Hickory Creek SUD	2.58%	0.00%	-0.13%	0.01%	-0.02%	0.02%	0.02%	-0.10%
414	Hidalgo and Cameron Counties ID #9	4.26%	0.00%	-0.29%	0.00%	-0.48%	0.08%	0.01%	-0.68%
207	Hidalgo County	13.03%	0.00%	-0.47%	0.00%	0.03%	0.08%	0.04%	-0.32%
516	Hidalgo County AD	14.04%	-0.06%	-0.33%	0.01%	-0.03%	0.10%	0.03%	-0.28%
401	Hidalgo County DD #1	12.35%	0.01%	-0.44%	0.00%	-0.05%	0.09%	0.03%	-0.36%
713	Hidalgo County ID #1	7.07%	0.00%	-0.18%	0.00%	-0.31%	0.16%	0.01%	-0.32%
438	Hidalgo County ID #2	5.77%	-0.01%	-0.19%	0.02%	-0.34%	0.11%	0.01%	-0.40%
486	Hidalgo County ID #6	6.27%	-0.02%	-0.55%	0.00%	-0.33%	0.08%	0.00%	-0.82%
992	Hidalgo MUD #1	3.44%	0.01%	0.00%	0.00%	0.00%	0.03%	0.00%	0.04%
674	High Plains Underground WCD # 1	4.67%	-0.03%	-0.15%	0.00%	-0.17%	0.09%	0.01%	-0.25%
1019	High Point SUD	11.42%	-0.02%	-0.34%	0.00%	0.01%	0.04%	0.05%	-0.26%
208	Hill County	10.60%	0.00%	-0.80%	0.00%	-0.14%	0.08%	0.02%	-0.84%
209	Hockley County	13.80%	-0.05%	-0.62%	0.00%	-0.41%	0.12%	0.02%	-0.94%
728	Hockley County AD	12.98%	-0.05%	-0.32%	0.01%	-0.10%	0.12%	0.03%	-0.31%
971	Hood County AD	9.75%	0.01%	0.08%	0.01%	-0.22%	0.06%	0.02%	-0.04%
210	Hood County	11.72%	0.03%	-0.42%	0.00%	-0.07%	0.09%	0.02%	-0.35%
211	Hopkins County	14.52%	-0.05%	-1.09%	0.00%	-0.20%	0.10%	0.04%	-1.20%
661	Hopkins County AD	5.76%	-0.03%	-0.19%	0.00%	-0.05%	0.07%	0.01%	-0.19%
1029	HA of Starr County	5.62%	0.03%	-0.13%	0.02%	0.01%	0.04%	0.02%	-0.01%
909	HA of the City of Edinburg Texas	6.94%	-0.02%	-0.43%	0.01%	0.02%	0.06%	0.01%	-0.35%
1036	HA of the City of Kirbyville	10.24%	-0.05%	-0.28%	0.01%	-0.05%	0.08%	0.01%	-0.28%
1003	HA of the City of Knox City	14.04%	-0.03%	0.00%	0.01%	-0.18%	0.09%	0.00%	-0.11%
917	HA of the City of Mercedes Texas	10.91%	0.02%	-0.15%	0.00%	0.03%	0.05%	0.03%	-0.02%
1082	HA of the City of Mission	4.21%	0.00%	-0.05%	0.00%	-0.03%	0.03%	0.00%	-0.05%
1002	HA of the City of Munday	8.19%	-0.03%	-0.01%	0.00%	-0.03%	0.05%	0.01%	-0.01%
1010	HA of Travis County	7.61%	0.05%	-0.10%	0.00%	-0.02%	0.04%	0.02%	-0.01%
212	Houston County	7.68%	-0.02%	-0.35%	0.00%	-0.19%	0.10%	0.01%	-0.45%
694	Houston County AD	11.38%	-0.07%	-0.22%	0.01%	-0.19%	0.14%	0.02%	-0.31%
213	Howard County	12.18%	-0.01%	-0.37%	0.00%	-0.34%	0.09%	0.04%	-0.59%
1086	Howard County AD	9.52%	0.03%	-0.21%	0.00%	-0.01%	0.01%	0.02%	-0.16%
214	Hudspeth County	6.01%	-0.02%	-0.61%	0.01%	-0.07%	0.05%	0.02%	-0.62%
215	Hunt County	12.26%	0.00%	-0.53%	0.00%	-0.15%	0.08%	0.04%	-0.56%
749	Hunt County AD	13.63%	0.03%	-0.35%	0.00%	0.02%	0.10%	-0.27%	-0.47%
1043	Hurst Creek MUD	9.32%	0.04%	-0.26%	0.00%	0.06%	0.03%	0.02%	-0.11%
216	Hutchinson County	11.55%	-0.01%	-0.66%	0.00%	-0.51%	0.12%	0.02%	-1.04%
778	Hutchinson County AD	5.70%	0.02%	-0.10%	0.01%	-0.04%	0.09%	0.01%	-0.01%
711	Iraan General HD	9.27%	0.00%	-0.37%	0.00%	-0.01%	0.05%	0.03%	-0.30%
217	Irion County	9.77%	0.04%	-0.33%	0.00%	-0.50%	0.16%	0.02%	-0.61%
779	Irion County AD	7.48%	0.00%	0.00%	0.00%	0.02%	0.06%	0.00%	0.08%
218	Jack County	10.74%	0.01%	-0.34%	0.01%	-0.48%	0.09%	0.01%	-0.70%
592	Jack County AD	10.49%	-0.32%	0.05%	0.00%	0.00%	0.15%	0.00%	-0.12%
219	Jackson County	10.45%	-0.03%	-0.27%	0.00%	-0.36%	0.11%	0.01%	-0.54%
770	Jackson County AD	6.07%	-0.04%	-0.23%	0.00%	0.05%	0.06%	0.02%	-0.14%
441	Jackson County County-Wide DD	17.17%	-0.13%	-0.47%	0.02%	-0.60%	0.22%	0.04%	-0.92%
972	Jackson County ESD #3	11.94%	0.00%	-0.21%	0.00%	0.21%	0.05%	0.03%	0.08%
220	Jasper County	18.68%	0.02%	-0.49%	0.01%	-0.27%	0.11%	0.03%	-0.59%

ER Number	Employer Name	12/31/2020		Termination			Misc.	Wage/ Payroll	Total
		Valuation Results	Retirement	& Refund	Disability	Mortality	Assump	Assump	Change
393	Jasper County AD	9.06%	0.00%	-0.39%	0.01%	-0.04%	0.04%	0.04%	-0.34%
657	Jasper County WCID #1	23.74%	-0.05%	-0.27%	0.01%	0.01%	0.09%	0.05%	-0.16%
221	Jeff Davis County	5.61%	0.01%	-0.50%	0.01%	-0.36%	0.08%	0.01%	-0.75%
810	Jefferson County AD	15.21%	-0.09%	-0.02%	0.01%	-0.09%	0.10%	0.03%	-0.06%
222	Jefferson County	20.25%	-0.04%	-0.33%	0.01%	-0.22%	0.12%	0.03%	-0.44%
404	Jefferson County DD #3	9.08%	-0.04%	-0.20%	0.00%	-0.62%	0.34%	0.01%	-0.51%
408	Jefferson County DD #6	16.70%	-0.01%	-0.06%	0.00%	-0.10%	0.11%	0.03%	-0.03%
405	Jefferson County DD #7	14.72%	-0.04%	-0.24%	0.00%	-0.13%	0.13%	0.01%	-0.26%
451	Jefferson County WCID #10	4.29%	-0.04%	-0.33%	0.00%	-0.05%	0.08%	0.02%	-0.32%
223	Jim Hogg County	3.16%	-0.02%	-0.18%	0.00%	-0.10%	0.06%	0.01%	-0.23%
680	Jim Hogg County AD	13.32%	-0.18%	0.00%	0.01%	-0.19%	0.21%	0.00%	-0.15%
656	Jim Hogg County ESD #1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
641	Jim Hogg County WCID #2	5.67%	-0.01%	-0.17%	0.00%	-0.31%	0.12%	0.00%	-0.37%
224	Jim Wells County	10.57%	-0.03%	-0.73%	0.00%	-0.20%	0.10%	0.02%	-0.84%
225	Johnson County	12.45%	0.02%	-0.43%	0.00%	-0.13%	0.10%	0.02%	-0.42%
741	Jonah Water SUD	7.39%	0.01%	-0.28%	0.00%	0.04%	0.03%	-0.13%	-0.33%
226	Jones County	14.45%	-0.03%	-1.04%	0.00%	-0.30%	0.09%	0.04%	-1.24%
496	Jones County AD	16.03%	-0.08%	-0.11%	0.01%	-0.39%	0.16%	0.02%	-0.39%
227	Karnes County	11.77%	-0.04%	-0.75%	0.00%	-0.15%	0.08%	0.03%	-0.83%
524	Karnes County AD	12.65%	-0.10%	-0.21%	0.00%	-0.06%	0.09%	0.02%	-0.26%
455	Karnes County HD	10.05%	-0.05%	-0.36%	0.02%	-0.09%	0.08%	0.02%	-0.38%
228	Kaufman County	10.45%	-0.02%	-0.58%	0.01%	-0.09%	0.06%	0.03%	-0.59%
662	Kaufman County AD	11.72%	-0.04%	-0.61%	0.00%	-0.04%	0.07%	0.03%	-0.59%
671	Kendall AD	11.65%	0.06%	-0.05%	0.00%	-0.15%	0.11%	0.02%	-0.01%
229	Kendall County	8.90%	-0.02%	-0.39%	0.00%	-0.05%	0.08%	0.02%	-0.36%
619	Kendall County WCID #1	10.57%	-0.03%	-0.24%	0.01%	-0.14%	0.13%	0.01%	-0.26%
230	Kenedy County	20.83%	-0.02%	-0.29%	0.00%	-0.46%	0.21%	0.03%	-0.54%
854	Kenedy County Central AD	14.24%	-0.02%	0.01%	0.00%	-0.25%	0.22%	0.01%	-0.03%
906	Kenedy County Fire & ESD No. 1	6.26%	-0.04%	-0.02%	0.01%	-0.11%	0.06%	0.01%	-0.09%
231	Kent County	13.27%	-0.01%	-0.73%	0.02%	-0.43%	0.12%	0.03%	-1.01%
594	Kent County Tax AD	18.12%	0.01%	0.00%	0.01%	-1.81%	0.05%	0.03%	-1.71%
232	Kerr County	14.72%	-0.02%	-0.62%	0.00%	-0.12%	0.10%	0.03%	-0.63%
956	Kerr County Soil and WCD	6.47%	0.01%	0.00%	0.01%	-0.07%	0.04%	-0.01%	-0.02%
653	Kerr Emergency 911 Network	7.68%	-0.04%	-0.04%	0.01%	0.17%	0.09%	0.01%	0.20%
233	Kimble County	9.24%	-0.06%	-0.64%	0.00%	-0.14%	0.08%	0.02%	-0.74%
234	King County	13.88%	-0.01%	-0.39%	0.01%	-0.72%	0.15%	0.02%	-0.94%
755	King County AD	16.09%	0.01%	-0.01%	0.00%	-0.10%	0.06%	0.01%	-0.03%
235	Kinney County	8.63%	0.02%	-0.57%	0.01%	-0.21%	0.08%	0.03%	-0.64%
579	Kinney County AD	8.63%	0.05%	-0.05%	0.00%	-1.09%	0.07%	0.01%	-1.02%
236	Kleberg County	8.46%	-0.05%	-0.23%	0.00%	-0.26%	0.08%	0.24%	-0.22%
237	Knox County	6.68%	0.02%	-0.27%	0.01%	-0.38%	0.08%	0.00%	-0.54%
241	La Salle County	10.91%	0.01%	-0.85%	0.00%	-0.02%	0.06%	0.05%	-0.75%
540	Laguna Madre WD - Cameron County	14.07%	-0.02%	-0.35%	0.00%	0.04%	0.08%	0.03%	-0.22%
867	Lake Cities MUA	11.17%	-0.08%	-0.25%	0.01%	0.05%	0.06%	0.03%	-0.18%
1074	Lake Fork SUD	3.62%	0.00%	-0.09%	0.00%	0.01%	0.01%	0.01%	-0.06%
874	Lake Kiowa SUD	11.74%	0.00%	0.00%	0.00%	-0.23%	0.15%	0.00%	-0.08%
514	Lakeway MUD - Travis County	12.44%	-0.08%	-0.43%	0.00%	-0.06%	0.09%	0.04%	-0.44%
238	Lamar County	14.19%	-0.02%	-0.65%	0.01%	-0.11%	0.09%	0.04%	-0.64%
808	Lamar County AD	8.46%	-0.03%	-0.20%	0.01%	-0.21%	0.09%	0.00%	-0.34%
239	Lamb County	12.44%	-0.01%	-0.43%	0.01%	-0.33%	0.11%	0.03%	-0.62%
650	Lampasas Central AD	8.78%	-0.07%	-0.34%	0.02%	0.03%	0.03%	0.04%	-0.29%
240	Lampasas County	16.24%	0.00%	-0.40%	0.00%	-0.37%	0.13%	0.03%	-0.61%
731	LaSalle County AD	15.57%	-0.02%	-0.02%	0.02%	0.06%	0.07%	0.01%	0.12%
439	Lavaca - Navidad RA - Jackson County	10.94%	-0.03%	-0.03%	0.01%	-0.15%	0.11%	0.01%	-0.08%
242	Lavaca County	16.42%	-0.01%	-0.33%	0.02%	-0.27%	0.10%	0.02%	-0.46%
977	Lee CAD	7.71%	-0.03%	-0.10%	0.02%	-0.03%	0.05%	0.02%	-0.07%
243	Lee County	10.33%	-0.03%	-0.22%	0.02%	-0.25%	0.07%	0.02%	-0.39%
244	Leon County	4.21%	0.01%	-0.51%	0.00%	-0.20%	0.09%	0.01%	-0.60%
468	Leon County Central AD	6.57%	-0.04%	-0.27%	0.00%	-0.18%	0.09%	0.02%	-0.38%
245	Liberty County	16.34%	0.03%	-0.59%	0.00%	-0.23%	0.11%	0.03%	-0.65%
481	Liberty County Central AD	17.92%	0.02%	-0.39%	0.00%	-0.18%	0.08%	0.03%	-0.44%
246	Limestone County	6.08%	-0.04%	-0.33%	0.01%	-0.20%	0.09%	0.03%	-0.44%
695	Limestone County AD	17.69%	-0.03%	-0.32%	0.01%	-0.11%	0.12%	0.02%	-0.31%
247	Lipscomb County	10.05%	-0.05%	-0.21%	0.01%	-0.61%	0.14%	0.01%	-0.71%
248	Live Oak County	11.58%	0.00%	-0.54%	0.00%	-0.33%	0.17%	0.04%	-0.66%
591	Live Oak County AD	18.51%	-0.11%	-0.35%	0.00%	-0.21%	0.08%	0.03%	-0.56%

ER Number	Employer Name	12/31/2020		Termination			Misc.	Wage/	Total
		Valuation Results	Retirement	& Refund	Disability	Mortality	Assump	Payroll Assump	
780	Llano CAD	9.44%	0.04%	-0.10%	0.00%	-0.03%	0.05%	0.02%	-0.02%
249	Llano County	8.51%	-0.01%	-0.33%	0.01%	-0.22%	0.10%	0.01%	-0.44%
250	Loving County	12.16%	0.00%	-0.31%	0.00%	-0.44%	0.10%	0.02%	-0.63%
513	Loving County AD	6.60%	0.00%	0.01%	0.00%	-0.35%	0.11%	0.00%	-0.23%
756	Lower Trinity ECD	16.30%	-0.02%	0.00%	0.02%	-0.31%	0.13%	0.00%	-0.18%
714	Lower Valley WD	10.11%	0.00%	-0.92%	0.01%	-0.08%	0.09%	0.02%	-0.88%
499	Lubbock Central AD	13.60%	-0.11%	-0.47%	0.00%	-0.25%	0.17%	0.03%	-0.63%
251	Lubbock County	11.90%	-0.01%	-0.58%	0.00%	-0.03%	0.08%	0.04%	-0.50%
425	Lubbock County WCID #1	6.27%	-0.01%	-0.84%	0.00%	-0.16%	0.07%	0.02%	-0.92%
558	Lubbock ECD	11.56%	-0.04%	0.01%	0.00%	-0.16%	0.14%	0.03%	-0.02%
647	Lubbock Reese Redevelopment Auth.	3.80%	-0.01%	-0.05%	0.01%	-0.19%	0.05%	0.00%	-0.19%
639	Lumberton MUD	9.66%	-0.03%	-0.38%	0.00%	0.04%	0.07%	0.03%	-0.27%
252	Lynn County	1.78%	-0.02%	-0.41%	0.00%	-0.13%	0.05%	0.02%	-0.49%
497	Lynn County AD	13.42%	-0.02%	-0.01%	0.00%	-0.79%	0.03%	0.00%	-0.79%
442	Lynn County HD	8.00%	0.01%	-0.19%	0.00%	-0.04%	0.05%	0.03%	-0.14%
630	Macedonia - Eylau MUD - Bowie County	12.84%	-0.01%	-0.03%	0.00%	-0.16%	0.10%	0.03%	-0.07%
500	Mackenzie MWA - Briscoe County	1.60%	-0.07%	-0.17%	0.01%	-1.03%	0.05%	0.01%	-1.20%
256	Madison County	9.46%	0.01%	-0.41%	0.00%	-0.30%	0.08%	0.02%	-0.60%
596	Madison County AD	17.18%	-0.09%	-0.24%	0.01%	-0.17%	0.11%	0.04%	-0.34%
257	Marion County	12.02%	-0.03%	-0.48%	0.01%	-0.44%	0.13%	0.03%	-0.78%
675	Marion County AD	5.05%	-0.02%	0.00%	0.01%	-0.09%	0.07%	0.01%	-0.02%
931	Marion-Cass Soil and WCD	16.54%	0.00%	0.00%	0.00%	-0.66%	0.23%	0.00%	-0.43%
658	Marshall-Harrison Co. Health Dist.	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
258	Martin County	12.16%	-0.03%	-0.50%	0.00%	-0.26%	0.09%	0.02%	-0.68%
595	Martin County AD	14.44%	-0.03%	-0.16%	0.01%	-0.50%	0.16%	0.02%	-0.50%
259	Mason County	7.77%	-0.04%	-0.56%	0.00%	-0.25%	0.08%	0.03%	-0.74%
924	Mason County Soil & WCD #223	5.13%	-0.06%	0.00%	0.00%	0.04%	0.05%	0.01%	0.04%
260	Matagorda County	14.14%	-0.02%	-0.48%	0.00%	-0.28%	0.10%	0.03%	-0.65%
987	Matagorda County AD	10.76%	-0.05%	-0.54%	0.00%	-0.01%	0.10%	0.02%	-0.48%
678	Matagorda County DD	11.20%	0.00%	-0.20%	0.02%	0.08%	0.14%	0.01%	0.05%
440	Matagorda County HD	8.02%	-0.04%	-0.26%	0.01%	-0.15%	0.08%	0.03%	-0.33%
677	Matagorda County ND #1	12.21%	-0.04%	-0.04%	0.01%	-0.37%	0.14%	0.00%	-0.30%
261	Maverick County	12.85%	-0.01%	-1.23%	0.00%	-0.07%	0.07%	0.03%	-1.21%
729	Maverick County HD	3.34%	-0.01%	-0.15%	0.00%	-0.05%	0.04%	0.01%	-0.16%
453	Maverick County WCID #1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
844	McCamey County HD	4.09%	-0.02%	-0.36%	0.00%	-0.05%	0.04%	0.01%	-0.38%
253	McCulloch County	6.20%	-0.03%	-0.43%	0.01%	-0.16%	0.05%	0.02%	-0.54%
512	McCulloch County AD	17.53%	-0.07%	-0.25%	0.00%	0.51%	0.08%	0.05%	0.32%
254	McLennan County	13.19%	-0.01%	-0.80%	0.00%	-0.17%	0.07%	0.03%	-0.88%
725	McLennan County 911 EAD	14.36%	0.00%	0.01%	0.00%	-0.19%	0.18%	0.01%	0.01%
491	McLennan County AD	12.55%	-0.01%	-0.28%	0.00%	-0.52%	0.15%	0.03%	-0.63%
679	McLennan County WCID #2	1.65%	0.00%	0.00%	0.02%	-0.12%	0.02%	0.01%	-0.07%
1037	McMullen CAD	14.97%	0.00%	0.00%	0.00%	0.04%	0.03%	0.04%	0.11%
255	McMullen County	8.38%	-0.02%	-0.33%	0.01%	-0.34%	0.11%	0.03%	-0.54%
841	Medical Arts Hospital - Dawson County	2.68%	-0.02%	-0.19%	0.00%	0.00%	0.02%	0.01%	-0.18%
262	Medina County	9.11%	0.00%	-0.37%	0.01%	-0.12%	0.07%	0.02%	-0.39%
705	Medina County 911 District	7.86%	-0.03%	-0.02%	0.01%	-0.16%	0.16%	0.00%	-0.04%
535	Medina County AD	7.97%	-0.06%	-0.28%	0.02%	-0.05%	0.09%	0.03%	-0.25%
419	Memorial Medical Center - Calhoun County	10.71%	-0.03%	-0.40%	0.00%	-0.11%	0.07%	0.04%	-0.43%
263	Menard County	8.04%	-0.06%	-0.31%	0.01%	-0.30%	0.10%	0.02%	-0.54%
1070	Menard County HD	2.81%	0.01%	-0.09%	0.00%	0.00%	0.01%	0.00%	-0.07%
377	Menard County UWD	10.66%	-0.01%	0.00%	0.00%	-0.03%	0.01%	0.02%	-0.01%
743	Mesa Underground WCD	5.48%	0.01%	0.00%	0.00%	-0.28%	0.01%	0.02%	-0.24%
669	Middle Rio Grande Development Council	19.05%	-0.03%	-0.61%	0.00%	-0.24%	0.13%	0.01%	-0.73%
492	Midland Central AD	15.28%	-0.07%	-0.32%	0.00%	-0.88%	0.22%	0.02%	-1.03%
264	Midland County	11.97%	-0.03%	-0.61%	0.01%	-0.11%	0.07%	0.03%	-0.64%
570	Midland ECD	16.47%	0.01%	-0.18%	0.01%	-0.31%	0.09%	0.04%	-0.34%
911	Milam AD	5.10%	0.00%	-0.07%	0.00%	-0.01%	0.02%	0.01%	-0.05%
265	Milam County	9.32%	-0.02%	-0.42%	0.00%	-0.28%	0.09%	0.02%	-0.61%
617	Mills Central AD	13.36%	0.01%	-0.21%	0.01%	-0.38%	0.05%	0.03%	-0.49%
266	Mills County	11.97%	0.01%	-0.50%	0.02%	-0.26%	0.09%	0.03%	-0.61%
267	Mitchell County	9.23%	-0.03%	-0.31%	0.01%	-0.27%	0.09%	0.02%	-0.50%
484	Mitchell County AD	11.17%	-0.04%	0.00%	-0.01%	-0.15%	0.07%	0.00%	-0.13%
919	Monahans HA	8.13%	0.01%	-0.03%	0.01%	-0.06%	0.05%	0.03%	0.01%
268	Montague County	12.73%	0.00%	-0.35%	0.02%	-0.32%	0.12%	0.02%	-0.51%
504	Montague County Tax AD	22.07%	-0.19%	-0.27%	0.00%	-0.90%	0.19%	0.02%	-1.15%

ER Number	Employer Name	12/31/2020					Misc. Assump	Wage/ Payroll Assump	Total Change
		Valuation Results	Retirement	Termination & Refund	Disability	Mortality			
605	Montgomery Central AD	15.55%	0.02%	-0.33%	0.00%	-0.17%	0.08%	0.03%	-0.37%
269	Montgomery County	12.71%	-0.01%	-0.49%	0.00%	-0.04%	0.08%	0.03%	-0.43%
667	Montgomery County ECD	19.84%	0.06%	0.07%	0.01%	-0.29%	0.09%	0.02%	-0.05%
696	Montgomery County ESD No 3	7.24%	0.00%	-0.29%	0.00%	0.15%	0.04%	-0.10%	-0.20%
982	Montgomery County ESD #4	5.90%	0.01%	-0.23%	0.00%	0.04%	0.03%	0.02%	-0.13%
800	Montgomery County ESD #8	10.78%	0.02%	-0.08%	0.00%	0.11%	0.06%	-0.20%	-0.09%
999	Montgomery County ESD #7	3.21%	0.01%	0.00%	0.00%	0.06%	0.02%	0.02%	-0.09%
989	Montgomery County ESD #9	4.50%	-0.01%	-0.25%	0.00%	0.07%	0.02%	0.02%	-0.15%
973	Montgomery County ESD #10	11.13%	0.00%	0.01%	0.01%	-0.25%	0.17%	-0.01%	-0.07%
651	Montgomery County ESD #1	13.18%	-0.01%	-0.59%	0.00%	0.26%	0.05%	-0.23%	-0.52%
763	Montgomery County HD	9.50%	-0.02%	-0.72%	0.00%	0.10%	0.04%	-0.04%	-0.64%
804	Montgomery County HA	14.15%	0.04%	-0.01%	0.00%	-0.88%	0.23%	-0.01%	-0.63%
270	Moore County	11.30%	-0.05%	-0.33%	0.01%	-0.26%	0.12%	0.03%	-0.48%
733	Moore County AD	8.34%	0.02%	-0.01%	0.00%	-0.08%	0.06%	0.01%	0.00%
412	Moore County HD	8.22%	0.01%	-0.34%	0.00%	-0.02%	0.05%	0.04%	-0.26%
271	Morris County	12.95%	-0.03%	-0.34%	0.00%	-0.67%	0.11%	0.02%	-0.91%
1089	Morris County AD	11.74%	-0.07%	-0.15%	0.00%	-0.01%	0.03%	0.01%	-0.19%
738	Mustang SUD	9.02%	0.00%	-0.95%	0.01%	0.00%	0.04%	0.04%	-0.86%
273	Nacogdoches County	12.60%	-0.05%	-0.96%	0.00%	-0.18%	0.10%	0.04%	-1.05%
515	Navarro Central AD	22.99%	-0.03%	-0.72%	0.01%	-0.72%	0.22%	0.01%	-1.23%
274	Navarro County	11.97%	-0.03%	-0.32%	0.01%	-0.13%	0.10%	0.02%	-0.35%
572	Newton Central AD	20.25%	-0.02%	-0.63%	0.02%	-0.32%	0.13%	0.02%	-0.80%
275	Newton County	8.67%	-0.01%	-0.66%	0.01%	-0.26%	0.10%	0.01%	-0.81%
276	Nolan County	9.91%	-0.02%	-0.51%	0.00%	-0.28%	0.07%	0.02%	-0.72%
962	Nortex RPC	4.63%	-0.02%	-0.14%	0.00%	-0.11%	0.06%	0.01%	-0.20%
1030	North Blanco County ESD No. 1	3.10%	-0.01%	-0.17%	0.01%	0.01%	0.01%	0.01%	-0.14%
556	North Central Texas MWA	6.00%	-0.14%	-0.13%	0.00%	0.03%	0.13%	0.01%	-0.10%
938	North East Texas RMA	9.19%	0.00%	0.00%	0.00%	-0.09%	0.06%	0.01%	-0.02%
852	North Hunt SUD	6.57%	0.03%	-0.10%	0.00%	0.06%	0.02%	0.03%	0.04%
838	North Plains ECD	4.91%	-0.03%	-0.17%	0.00%	-0.06%	0.08%	0.02%	-0.16%
927	North Texas ECC	9.60%	0.00%	-0.53%	0.00%	0.04%	0.04%	0.03%	-0.42%
646	North Texas Tollway Auth.	10.71%	0.01%	-0.85%	0.00%	-0.06%	0.09%	0.02%	-0.79%
1056	Northeast Gaines County ESD No. 1	7.24%	-0.02%	-0.39%	0.01%	0.00%	0.03%	0.03%	-0.34%
562	Northeast Texas MWD	5.89%	-0.04%	-0.19%	0.00%	-0.20%	0.13%	0.02%	-0.28%
632	Northeast Texas Public Health District	6.93%	0.00%	-0.32%	0.00%	-0.07%	0.05%	0.04%	-0.30%
368	Northern Trinity GCD	6.23%	0.01%	0.00%	0.00%	-0.19%	0.11%	0.01%	-0.06%
277	Nueces County	14.32%	-0.07%	-0.92%	0.02%	-0.26%	0.10%	0.02%	-1.11%
683	Nueces County AD	13.79%	0.00%	-0.17%	0.00%	-0.10%	0.11%	0.03%	-0.13%
400	Nueces County DD #2	6.35%	0.00%	-0.43%	0.00%	-0.30%	0.09%	0.02%	-0.62%
791	Nueces County ESD #2	10.21%	-0.01%	0.00%	0.02%	0.09%	0.05%	0.01%	0.16%
416	Nueces County WCID #3	7.65%	-0.06%	-0.27%	0.01%	-0.30%	0.11%	0.01%	-0.50%
450	Nueces County WCID #4	14.49%	-0.05%	-0.46%	0.01%	-0.10%	0.11%	0.04%	-0.45%
278	Ochiltree County	6.64%	-0.02%	-0.38%	0.00%	-0.40%	0.11%	0.01%	-0.68%
1042	Ochiltree County AD	9.53%	-0.02%	-0.16%	0.01%	-0.02%	0.04%	0.03%	-0.12%
279	Oldham County	15.59%	0.01%	-0.28%	0.01%	-0.47%	0.19%	0.02%	-0.52%
517	Oldham County AD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
280	Orange County	15.03%	-0.03%	-0.36%	0.01%	-0.16%	0.10%	0.02%	-0.43%
490	Orange County AD	14.74%	0.10%	-0.22%	0.00%	-0.30%	0.06%	0.03%	-0.33%
421	Orange County DD	12.53%	-0.02%	-0.40%	0.00%	-0.15%	0.09%	0.02%	-0.46%
665	Orange County ESD # 1	9.02%	0.01%	-0.40%	0.02%	0.06%	0.08%	0.02%	-0.21%
803	Orange County ESD #2	10.65%	-0.04%	-0.24%	0.00%	0.04%	0.06%	0.03%	-0.15%
660	Orange Co. Navigation & Port Dist.	8.08%	0.04%	-0.23%	0.01%	-0.42%	0.07%	0.03%	-0.50%
631	Orange County WCID #1	8.08%	-0.03%	-0.18%	0.02%	-0.08%	0.08%	0.02%	-0.17%
730	Palo Duro River Auth.	1.10%	0.00%	0.00%	0.01%	-0.33%	0.05%	0.01%	-0.26%
723	Palo Pinto AD	13.12%	-0.02%	-0.23%	0.01%	0.00%	0.12%	0.02%	-0.10%
281	Palo Pinto County	12.17%	-0.01%	-0.46%	0.01%	-0.19%	0.09%	0.03%	-0.53%
282	Panola County	3.34%	-0.01%	-0.49%	0.01%	-0.29%	0.11%	0.03%	-0.64%
283	Parker County	13.31%	0.00%	-0.50%	0.00%	-0.08%	0.10%	0.03%	-0.45%
717	Parker County AD	14.00%	-0.19%	-0.31%	0.00%	-0.05%	0.14%	-0.58%	-0.99%
922	Parker County ESD No. 1	9.54%	0.00%	-0.57%	0.00%	0.08%	0.03%	0.05%	-0.41%
784	Parker County HD	4.97%	-0.01%	-0.14%	0.01%	0.04%	0.03%	-0.08%	-0.15%
754	Parker County SUD	2.22%	-0.02%	0.00%	0.00%	-0.02%	0.05%	0.00%	0.01%
284	Parmer County	8.30%	-0.03%	-0.38%	0.01%	-0.39%	0.10%	0.02%	-0.67%
747	Parmer County AD	8.21%	-0.02%	-0.01%	0.00%	0.03%	0.05%	0.01%	0.06%
765	Pecan Valley ECD	8.37%	-0.04%	0.00%	0.00%	0.03%	0.06%	0.01%	0.06%
285	Pecos County	11.76%	-0.01%	-0.51%	0.00%	-0.20%	0.09%	0.03%	-0.60%

ER Number	Employer Name	12/31/2020		Termination			Misc.	Wage/	Total
		Valuation Results	Retirement	& Refund	Disability	Mortality	Assump	Payroll Assump	Change
494	Pecos County AD	9.06%	0.00%	-0.42%	0.01%	0.06%	0.06%	0.04%	-0.25%
774	Pecos County WCID #1	6.76%	-0.01%	-0.01%	0.00%	-0.20%	0.07%	0.01%	-0.14%
796	Permian Basin RPC	9.44%	-0.06%	-0.22%	0.00%	-0.06%	0.08%	0.03%	-0.23%
673	Permian RMC	10.34%	0.00%	-0.43%	0.00%	0.00%	0.06%	0.03%	-0.34%
707	Pineywoods ECD	8.67%	-0.05%	-0.03%	0.00%	-0.39%	0.09%	-0.01%	-0.39%
697	Polk Central AD	16.84%	0.02%	0.08%	0.01%	-0.04%	0.08%	0.04%	0.19%
286	Polk County	15.46%	-0.01%	-1.12%	0.00%	-0.13%	0.11%	0.04%	-1.11%
739	Polk County FWSD #2	11.07%	0.01%	0.00%	0.00%	0.08%	0.06%	0.02%	0.17%
676	Port of Bay City Auth.	12.45%	0.02%	0.00%	0.00%	0.44%	0.11%	0.00%	0.57%
449	Port of Beaumont ND	15.27%	-0.02%	-0.27%	0.01%	-0.34%	0.14%	0.01%	-0.48%
620	Port of Corpus Christi Auth.	9.95%	-0.01%	-0.20%	0.00%	-0.18%	0.08%	0.02%	-0.29%
622	Port of Port Arthur ND	11.03%	0.02%	-0.24%	0.01%	-0.42%	0.16%	0.01%	-0.46%
726	Post Oak Savannah ECD	5.20%	-0.02%	-0.02%	0.00%	-0.15%	0.12%	0.01%	-0.06%
560	Potter - Randall County ECD	16.87%	-0.07%	0.00%	0.01%	0.02%	0.14%	0.02%	0.12%
287	Potter County	15.53%	-0.02%	-0.49%	0.01%	-0.11%	0.10%	0.03%	-0.48%
840	Prairielands ECD	10.64%	0.01%	0.00%	0.00%	-0.11%	0.04%	0.01%	-0.05%
626	Presidio AD	7.00%	-0.05%	-0.06%	0.00%	0.02%	0.04%	0.01%	-0.04%
288	Presidio County	8.82%	-0.04%	-0.35%	0.00%	-0.16%	0.08%	0.02%	-0.45%
289	Rains County	9.14%	-0.05%	-0.86%	0.00%	-0.18%	0.12%	0.02%	-0.95%
537	Rains County AD	22.38%	0.02%	0.08%	0.00%	-0.34%	0.20%	0.32%	0.28%
290	Randall County	12.02%	-0.01%	-0.54%	0.01%	-0.01%	0.07%	0.04%	-0.44%
564	Randall County AD including Potter Co AD	16.02%	-0.12%	-0.35%	0.00%	-0.44%	0.19%	0.03%	-0.69%
406	Rankin County HD - Upton County	9.85%	0.01%	-0.49%	0.00%	-0.06%	0.05%	-0.09%	-0.58%
823	Rayburn Country MUD	5.86%	0.00%	0.00%	0.01%	0.02%	0.03%	0.01%	0.07%
291	Reagan County	14.11%	-0.09%	-0.97%	0.00%	-0.09%	0.11%	0.04%	-1.00%
445	Reagan HD	5.58%	-0.01%	-0.57%	0.00%	-0.08%	0.06%	0.12%	-0.48%
292	Real County	21.22%	-0.06%	-0.54%	0.01%	-0.59%	0.14%	0.02%	-1.03%
1007	Real County AD	9.28%	0.01%	0.00%	0.01%	0.01%	0.03%	0.02%	0.08%
505	Red Bluff WPCD - Reeves County	12.64%	-0.14%	-0.05%	0.01%	-0.38%	0.08%	0.03%	-0.45%
845	Red River AD	13.69%	-0.03%	-0.10%	0.00%	-0.04%	0.06%	0.02%	-0.09%
435	Red River Auth.	3.65%	-0.06%	-0.56%	0.00%	-0.17%	0.08%	0.03%	-0.68%
293	Red River County	10.77%	-0.04%	-0.36%	0.00%	-0.21%	0.09%	0.02%	-0.50%
921	Red River County Soil and WCD	7.97%	-0.07%	0.00%	0.01%	0.08%	0.06%	0.01%	0.09%
294	Reeves County	5.17%	-0.03%	-0.82%	0.00%	-0.08%	0.06%	0.03%	-0.84%
786	Reeves County AD	13.03%	-0.01%	-0.01%	0.02%	0.04%	0.06%	0.01%	0.11%
1087	Reeves County ESD No. 1	10.29%	0.05%	-0.18%	0.01%	-0.06%	0.04%	0.01%	-0.13%
1088	Reeves County ESD No. 2	8.57%	-0.01%	-0.51%	0.01%	0.00%	0.03%	0.03%	-0.45%
588	Reeves County HD	8.69%	0.01%	-0.67%	0.00%	-0.07%	0.06%	0.02%	-0.65%
295	Refugio County	6.11%	-0.05%	-0.46%	0.00%	-0.23%	0.09%	0.02%	-0.63%
543	Refugio County DD #1	6.48%	-0.01%	-0.12%	0.00%	-0.56%	0.28%	0.00%	-0.41%
801	Rio Grande COG	14.58%	-0.08%	-0.38%	0.01%	-0.13%	0.09%	0.03%	-0.46%
970	Riverside SUD	3.02%	-0.02%	-0.15%	0.00%	0.02%	0.02%	0.01%	-0.12%
296	Roberts County	8.21%	-0.01%	-0.20%	0.01%	-0.39%	0.09%	0.02%	-0.48%
297	Robertson County	9.05%	-0.02%	-0.30%	0.00%	-0.10%	0.09%	0.02%	-0.31%
904	Robertson County AD	3.48%	-0.05%	-0.09%	0.00%	0.03%	0.03%	0.01%	-0.07%
370	Robertson County ESD	9.97%	-0.01%	0.00%	0.00%	0.05%	0.04%	0.00%	0.08%
698	Rockwall Central AD	9.16%	0.01%	-0.34%	0.00%	-0.09%	0.07%	0.02%	-0.33%
298	Rockwall County	9.65%	-0.02%	-0.57%	0.00%	-0.10%	0.07%	0.04%	-0.58%
299	Runnels County	5.59%	-0.01%	-0.21%	0.01%	-0.38%	0.08%	-0.01%	-0.52%
300	Rusk County	10.52%	-0.05%	-0.33%	0.00%	-0.38%	0.11%	0.02%	-0.63%
612	Rusk County AD	14.90%	-0.04%	-1.66%	0.00%	-0.43%	0.11%	0.02%	-2.00%
848	Rusk County ECD	6.95%	-0.02%	0.00%	0.00%	-0.04%	0.04%	0.00%	-0.02%
301	Sabine County	8.46%	0.03%	-0.37%	0.00%	-0.26%	0.08%	0.01%	-0.51%
863	Sabine County AD	7.02%	0.02%	0.00%	0.01%	-0.21%	0.07%	0.00%	-0.11%
568	Sabine Pass Port Auth.	5.75%	0.03%	-0.10%	0.00%	-0.19%	0.09%	0.00%	-0.17%
706	Sabine-Neches ND of Jefferson County Texas	11.84%	-0.05%	-0.04%	0.01%	-0.17%	0.20%	0.02%	-0.03%
302	San Augustine County	8.55%	-0.01%	-0.47%	0.01%	-0.18%	0.09%	0.02%	-0.54%
303	San Jacinto County	9.44%	-0.02%	-0.62%	0.01%	-0.22%	0.10%	0.01%	-0.74%
553	San Jacinto County Central AD	11.50%	-0.01%	-0.29%	0.01%	-0.02%	0.07%	0.04%	-0.20%
990	San Jacinto County ESD	15.96%	-0.04%	0.00%	0.00%	0.05%	0.04%	0.02%	0.07%
1072	San Marcos HA	5.18%	0.01%	-0.09%	0.01%	0.00%	0.02%	0.00%	-0.05%
304	San Patricio County	12.52%	-0.05%	-0.56%	0.01%	-0.24%	0.09%	0.02%	-0.73%
495	San Patricio County AD	10.76%	-0.04%	-0.52%	0.01%	-0.11%	0.06%	0.04%	-0.56%
426	San Patricio County DD	15.62%	-0.01%	-0.08%	0.00%	-0.75%	0.06%	0.00%	-0.77%
750	San Patricio County ND #1	12.39%	0.00%	0.00%	0.01%	-0.10%	0.08%	0.01%	0.00%
422	San Patricio MWD	6.09%	-0.05%	-0.20%	0.00%	-0.22%	0.09%	0.02%	-0.36%

ER Number	Employer Name	12/31/2020		Termination			Misc.	Wage/ Payroll	Total
		Valuation Results	Retirement	& Refund	Disability	Mortality	Assump	Assump	Change
305	San Saba County	10.09%	-0.06%	-0.39%	0.00%	-0.44%	0.17%	0.02%	-0.70%
766	Santo SUD	13.18%	0.02%	0.00%	0.00%	0.19%	0.05%	0.02%	0.28%
306	Schleicher County	8.32%	-0.05%	-0.18%	0.00%	-0.63%	0.08%	0.01%	-0.77%
307	Scurry County	11.28%	-0.07%	-0.25%	0.01%	-0.40%	0.13%	0.02%	-0.56%
893	Scurry County AD	15.35%	0.01%	-0.24%	0.02%	-0.17%	0.10%	0.03%	-0.25%
760	Scurry County HD	8.68%	-0.03%	-0.44%	0.01%	-0.05%	0.07%	0.02%	-0.42%
983	Seis Lagos Utility District	5.55%	0.03%	-0.12%	0.00%	-0.03%	0.04%	0.00%	-0.08%
308	Shackelford County	15.31%	-0.05%	-0.60%	0.01%	-0.30%	0.11%	0.04%	-0.79%
470	Shackelford County AD	19.20%	-0.28%	-0.48%	0.02%	-0.51%	0.23%	0.03%	-0.99%
309	Shelby County	8.87%	-0.03%	-0.79%	0.01%	-0.26%	0.10%	0.02%	-0.95%
627	Shelby County AD	8.43%	-0.01%	-0.24%	0.00%	-0.18%	0.14%	0.02%	-0.27%
310	Sherman County	13.72%	-0.02%	-0.85%	0.01%	-0.62%	0.13%	0.02%	-1.33%
469	Sherman County AD	9.76%	-0.11%	-0.24%	0.00%	-0.72%	0.14%	0.03%	-0.90%
311	Smith County	12.23%	0.00%	-0.56%	0.00%	-0.08%	0.08%	0.03%	-0.53%
555	Smith County 911 CD	13.05%	-0.07%	-0.31%	0.00%	-0.26%	0.17%	0.03%	-0.44%
606	Smith County AD	6.48%	-0.11%	-1.20%	0.00%	-0.19%	0.14%	0.05%	-1.31%
385	Smith County ESD #2	4.59%	-0.01%	-0.29%	0.00%	0.01%	0.03%	0.03%	-0.23%
312	Somervell County	15.51%	0.01%	-0.42%	0.00%	-0.15%	0.09%	0.03%	-0.44%
507	Somervell County Central AD	10.73%	0.03%	-0.23%	0.00%	0.24%	0.06%	0.04%	0.14%
699	Somervell County WD	14.74%	0.00%	0.00%	0.01%	0.03%	0.13%	0.01%	0.18%
795	South Plains Assoc. of Governments	9.72%	-0.06%	-0.32%	0.01%	-0.08%	0.11%	0.03%	-0.31%
894	South Rains SUD	5.04%	0.01%	0.00%	0.00%	-0.02%	0.05%	0.01%	0.05%
645	South Texas Development Council	13.53%	-0.06%	-0.28%	0.01%	-0.56%	0.10%	0.03%	-0.76%
768	Southeast Texas ECD	16.78%	-0.01%	-0.01%	0.04%	-0.05%	0.17%	0.02%	0.16%
930	STAR Transit	2.62%	0.00%	-0.10%	0.00%	-0.06%	0.04%	0.00%	-0.12%
313	Starr County	7.54%	-0.01%	-0.47%	0.00%	-0.02%	0.05%	0.02%	-0.43%
536	Starr County AD	14.05%	-0.07%	-0.84%	0.00%	-0.14%	0.08%	0.03%	-0.94%
314	Stephens County	6.16%	-0.02%	-0.79%	0.01%	-0.34%	0.09%	0.02%	-1.03%
869	Stephens County Tax AD	9.52%	0.02%	0.00%	0.00%	-0.33%	0.14%	-0.01%	-0.18%
315	Sterling County	10.67%	0.03%	-0.98%	0.00%	-0.28%	0.05%	0.04%	-1.14%
837	Sterling County AD	10.92%	0.01%	0.00%	0.00%	-0.27%	0.19%	0.00%	-0.07%
316	Stonewall County	8.08%	-0.02%	-0.26%	0.00%	-0.65%	0.16%	0.01%	-0.76%
724	Stonewall County AD	0.01%	0.00%	0.00%	0.01%	-0.02%	0.01%	0.01%	0.01%
458	Stonewall Memorial HD	3.22%	-0.01%	-0.17%	0.00%	-0.10%	0.03%	0.02%	-0.23%
539	Stratford HD - Sherman County	4.17%	-0.03%	-0.34%	0.01%	-0.08%	0.04%	0.01%	-0.39%
317	Sutton County	7.56%	-0.05%	-0.23%	0.01%	-0.29%	0.12%	0.01%	-0.43%
573	Sutton County HD	8.99%	-0.01%	-0.94%	0.00%	-0.07%	0.06%	0.03%	-0.93%
318	Swisher County	10.63%	-0.02%	-0.31%	0.01%	-0.66%	0.11%	0.01%	-0.86%
460	Swisher County AD	22.25%	-0.04%	-0.41%	0.01%	-1.44%	0.05%	0.01%	-1.83%
356	Talty SUD	3.35%	0.02%	-0.07%	0.00%	0.00%	0.03%	0.00%	-0.02%
607	Tarrant AD	13.38%	-0.05%	-0.38%	0.01%	-0.31%	0.12%	0.04%	-0.57%
545	Tarrant Co 911 EAD	10.44%	0.02%	-0.25%	0.00%	-0.15%	0.08%	0.02%	-0.28%
319	Tarrant County	13.86%	-0.03%	-0.66%	0.01%	-0.16%	0.09%	0.03%	-0.72%
574	Tax AD of Cottle County	7.90%	-0.02%	0.00%	0.00%	-0.82%	0.18%	0.00%	-0.66%
320	Taylor County	11.02%	-0.05%	-0.47%	0.00%	-0.13%	0.08%	0.02%	-0.55%
321	Terrell County	6.49%	-0.02%	-0.26%	0.00%	-0.20%	0.07%	0.02%	-0.39%
753	Terrell County WCID #1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
322	Terry County	8.75%	0.01%	-0.41%	0.00%	-0.35%	0.11%	0.02%	-0.62%
402	Terry Memorial HD	5.18%	-0.02%	-0.61%	0.00%	-0.14%	0.07%	0.03%	-0.67%
437	Texas Assoc. of Counties	7.87%	-0.02%	-0.99%	0.01%	-0.12%	0.06%	0.04%	-1.02%
354	TCDRS	12.15%	-0.05%	-0.35%	0.00%	-0.04%	0.10%	0.03%	-0.31%
634	Texas Eastern 911 Network	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
986	The City of Quanah HA	7.61%	-0.01%	-0.01%	0.01%	0.02%	0.05%	0.02%	0.08%
772	The HA of the City of Abilene	4.89%	-0.03%	-0.20%	0.01%	-0.05%	0.06%	0.01%	-0.20%
777	The HA of the City of Huntington	1.48%	-0.03%	0.00%	0.00%	0.00%	0.05%	0.00%	0.02%
913	The HA of the City of Pharr Texas	4.72%	-0.01%	-0.09%	0.00%	0.00%	0.04%	0.01%	-0.05%
912	The HA of the County of Hidalgo Texas	10.85%	0.00%	-0.15%	0.00%	-0.04%	0.08%	0.02%	-0.09%
1081	Throckmorton CAD	3.61%	0.00%	0.00%	0.01%	-0.05%	0.01%	0.00%	-0.03%
323	Throckmorton County	12.59%	-0.03%	-0.26%	0.01%	-0.55%	0.16%	0.01%	-0.65%
324	Titus County	13.29%	0.01%	-0.56%	0.02%	-0.23%	0.07%	0.02%	-0.67%
742	Titus County AD	4.19%	-0.09%	-0.16%	0.01%	-0.01%	0.04%	0.02%	-0.19%
501	Titus County FWSD	9.99%	-0.08%	-0.25%	0.00%	0.00%	0.10%	0.03%	-0.20%
325	Tom Green County	8.28%	-0.05%	-0.74%	0.01%	-0.14%	0.08%	0.02%	-0.82%
601	Travis Central AD	11.90%	-0.13%	-1.05%	0.00%	-0.24%	0.12%	0.05%	-1.25%
326	Travis County	17.17%	-0.03%	-0.40%	0.00%	-0.01%	0.10%	0.03%	-0.31%
720	Travis County ESD #1 NLT Fire & Rescue	9.94%	-0.01%	-0.71%	0.01%	0.09%	0.04%	-0.09%	-0.67%

ER Number	Employer Name	12/31/2020		Termination			Misc.	Wage/ Payroll	Total Change
		Valuation Results	Retirement	& Refund	Disability	Mortality	Assump	Assump	
836	Travis County ESD #2	9.81%	0.01%	-0.30%	0.00%	0.11%	0.04%	0.04%	-0.10%
371	Travis County ESD #5	9.61%	0.00%	-0.51%	0.01%	0.05%	0.03%	0.04%	-0.38%
957	Travis County ESD 12	9.55%	0.00%	-0.86%	0.00%	0.08%	0.03%	0.04%	-0.71%
980	Travis County ESD #11	13.08%	-0.01%	-0.86%	0.00%	0.13%	0.04%	0.07%	-0.63%
659	Tri-County SUD	5.25%	-0.01%	-0.18%	0.02%	0.10%	0.05%	0.02%	0.00%
633	Trinity Bay Conservation District	14.86%	-0.06%	-0.47%	0.01%	-0.10%	0.13%	0.03%	-0.46%
327	Trinity County	8.34%	-0.05%	-0.67%	0.00%	-0.36%	0.14%	0.02%	-0.92%
857	Trinity County AD	8.48%	0.00%	-0.14%	0.00%	-0.03%	0.07%	0.02%	-0.08%
829	Trinity Glen Rose GCD	12.25%	0.01%	0.01%	0.00%	-0.06%	0.07%	0.02%	0.05%
790	Trophy Club MUD No 1	10.92%	0.00%	-0.16%	0.01%	0.01%	0.09%	0.02%	-0.03%
735	Two Way SUD	13.76%	-0.06%	0.00%	0.00%	0.10%	0.11%	0.01%	0.16%
328	Tyler County	8.52%	-0.04%	-0.78%	0.00%	-0.18%	0.10%	0.02%	-0.88%
471	Tyler County AD	11.80%	0.02%	-0.27%	0.00%	-0.25%	0.12%	0.05%	-0.33%
561	United ID - Hidalgo County	5.18%	-0.08%	-0.23%	0.00%	-0.12%	0.15%	0.01%	-0.27%
834	Upper Brushy Creek WCID	8.35%	-0.02%	0.00%	0.00%	-0.12%	0.16%	0.00%	0.02%
830	Upper Leon River MWD	9.40%	0.02%	-0.33%	0.01%	-0.10%	0.10%	0.03%	-0.27%
387	Upper Sabine Valley SWMD	11.52%	0.05%	-0.17%	0.01%	-0.05%	0.07%	0.02%	-0.07%
792	Upper Trinity ECD	8.22%	-0.01%	-1.38%	0.00%	0.04%	0.03%	0.02%	-1.30%
329	Upshur County	6.45%	-0.08%	-0.42%	0.00%	-0.19%	0.09%	0.01%	-0.59%
330	Upton County	9.41%	-0.02%	-0.34%	0.00%	-0.11%	0.11%	0.04%	-0.32%
682	Upton County AD	9.34%	-0.06%	0.00%	0.00%	-1.00%	0.10%	0.01%	-0.95%
331	Uvalde County	11.73%	-0.02%	-0.60%	0.00%	-0.20%	0.10%	0.04%	-0.68%
843	Uvalde County AD	10.94%	-0.04%	-0.30%	0.00%	-0.02%	0.04%	0.02%	-0.29%
332	Val Verde County	12.93%	-0.01%	-0.66%	0.01%	-0.15%	0.09%	0.04%	-0.68%
663	Valley MUD #2 - Cameron County	10.72%	-0.02%	-0.30%	0.02%	0.01%	0.11%	0.03%	-0.15%
586	Valwood Improvement Auth. - Dallas County	9.45%	-0.05%	-0.20%	0.00%	-0.23%	0.26%	0.01%	-0.21%
333	Van Zandt County	8.85%	-0.04%	-0.52%	0.01%	-0.26%	0.10%	0.02%	-0.69%
672	Van Zandt County AD	12.04%	0.02%	-0.22%	0.00%	-0.67%	0.13%	0.02%	-0.72%
420	Velasco DD - Brazoria County	5.50%	-0.02%	-0.19%	0.00%	-0.21%	0.10%	0.01%	-0.31%
334	Victoria County	14.94%	-0.02%	-0.73%	0.00%	-0.06%	0.08%	0.03%	-0.70%
423	Victoria County DD #3	23.77%	0.04%	-0.26%	0.01%	-1.53%	0.07%	0.01%	-1.66%
767	Victoria County ECD	6.67%	0.00%	0.00%	0.00%	-0.02%	0.05%	0.00%	0.03%
335	Walker County	14.47%	-0.02%	-0.51%	0.00%	-0.08%	0.09%	0.03%	-0.49%
872	Walker County AD	12.24%	-0.05%	-0.43%	0.01%	-0.04%	0.06%	0.05%	-0.40%
1085	Walker County ESD No. 2	11.48%	0.00%	0.00%	0.00%	-0.12%	0.09%	0.02%	-0.01%
748	Walker County SUD	9.02%	0.02%	-0.23%	0.01%	-0.03%	0.10%	0.02%	-0.11%
336	Waller County	8.82%	-0.01%	-0.71%	0.00%	-0.12%	0.07%	0.02%	-0.75%
773	Waller County AD	13.11%	-0.07%	-0.31%	0.00%	-0.13%	0.08%	0.02%	-0.41%
337	Ward County	14.00%	-0.03%	-0.65%	0.02%	-0.27%	0.11%	0.03%	-0.79%
565	Ward County Central AD	10.91%	-0.01%	-0.11%	0.00%	-0.45%	0.09%	0.01%	-0.47%
444	Ward Memorial Hospital	11.28%	-0.02%	-0.91%	0.00%	-0.19%	0.10%	0.02%	-1.00%
338	Washington County	12.99%	-0.03%	-1.05%	0.00%	-0.06%	0.08%	0.04%	-1.02%
339	Webb County	13.64%	0.00%	-0.47%	0.00%	0.02%	0.09%	0.04%	-0.32%
604	Webb County AD	8.71%	-0.03%	-0.32%	0.00%	0.04%	0.05%	0.03%	-0.23%
443	West Central Texas COG	19.93%	0.03%	-0.51%	0.00%	-0.38%	0.13%	0.02%	-0.71%
410	West Central Texas MWD	9.56%	-0.05%	-0.27%	0.01%	-0.28%	0.12%	0.01%	-0.46%
454	West Jefferson County MWD	15.13%	-0.03%	-0.31%	0.00%	-0.18%	0.07%	0.03%	-0.42%
688	West Nueces -Las Moras Soil and WCD #236	2.60%	0.04%	0.02%	0.01%	-0.12%	0.12%	0.00%	0.07%
358	West Travis County PUA	13.19%	-0.03%	-2.10%	0.00%	-0.02%	0.06%	0.02%	-2.07%
340	Wharton County	14.83%	-0.03%	-0.62%	0.00%	-0.26%	0.11%	0.03%	-0.78%
993	Wharton County CAD	17.14%	0.02%	-0.31%	0.00%	-0.04%	0.08%	0.02%	-0.23%
621	Wharton County WCID #1	13.95%	-0.01%	-0.02%	0.00%	-0.83%	0.37%	0.02%	-0.47%
923	Wharton County WCID No. 2	12.26%	0.00%	0.00%	0.02%	-0.17%	0.13%	0.01%	-0.01%
341	Wheeler County	10.14%	-0.01%	-0.38%	0.00%	-0.33%	0.16%	0.02%	-0.54%
476	Wheeler County AD	12.72%	0.10%	-0.07%	0.02%	-1.22%	0.10%	0.03%	-1.04%
427	White River MWD - Dickens County	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
740	Wichita AD	13.43%	-0.08%	-0.48%	0.00%	0.03%	0.12%	0.04%	-0.37%
342	Wichita County	13.91%	-0.02%	-0.60%	0.00%	-0.22%	0.11%	0.03%	-0.70%
446	Wichita County WID #2	12.89%	-0.04%	-0.24%	0.01%	-0.72%	0.16%	0.01%	-0.83%
559	Wichita-Wilbarger 911 District	12.52%	0.10%	-0.23%	0.00%	-2.10%	0.08%	0.00%	-2.15%
655	Wickson Creek SUD - Brazos County	13.37%	-0.02%	-0.35%	0.00%	-0.03%	0.19%	0.03%	-0.18%
343	Wilbarger County	13.19%	-0.05%	-0.34%	0.01%	-0.21%	0.12%	0.02%	-0.45%
715	Wilbarger County AD	11.82%	-0.07%	-0.04%	0.02%	-0.17%	0.10%	0.01%	-0.15%
530	Wilbarger County HD	2.30%	-0.03%	-0.25%	0.00%	-0.04%	0.03%	0.01%	-0.28%
344	Willacy County	6.98%	-0.05%	-0.89%	0.01%	-0.14%	0.07%	0.04%	-0.96%
575	Willacy County AD	14.62%	-0.06%	-0.18%	0.00%	-0.29%	0.09%	0.01%	-0.43%

ER Number	Employer Name	12/31/2020					Misc. Assump	Wage/ Payroll Assump	Total Change
		Valuation Results	Retirement	Termination & Refund	Disability	Mortality			
652	Willacy County HA	7.98%	0.00%	-0.01%	0.01%	-0.13%	0.08%	0.00%	-0.05%
608	Williamson Central AD	18.10%	-0.01%	-0.41%	0.00%	-0.05%	0.10%	0.03%	-0.34%
345	Williamson County	16.00%	-0.04%	-1.06%	0.00%	0.02%	0.09%	0.03%	-0.96%
798	Williamson County ESD #3	12.16%	-0.01%	-1.76%	0.00%	0.11%	0.04%	0.03%	-1.59%
897	Williamson County ESD #5	4.11%	-0.02%	-1.03%	0.00%	0.08%	0.02%	0.02%	-0.93%
1044	Williamson County ESD #7	2.52%	-0.01%	-0.12%	0.00%	0.00%	0.01%	0.01%	-0.11%
361	Williamson County ESD #4	13.03%	0.02%	-0.37%	0.00%	0.16%	0.04%	0.04%	-0.11%
346	Wilson County	10.94%	-0.01%	-0.35%	0.00%	-0.18%	0.08%	0.02%	-0.44%
479	Wilson County AD	17.33%	-0.17%	-0.38%	0.01%	-0.41%	0.13%	0.03%	-0.79%
1023	Wilson County ESD #1	7.13%	0.00%	-0.34%	0.00%	0.03%	0.04%	0.01%	-0.26%
1017	Wilson County ESD #3	4.26%	0.00%	-0.23%	0.00%	0.01%	0.02%	0.02%	-0.18%
347	Winkler County	14.51%	0.00%	-0.59%	0.00%	-0.43%	0.15%	0.03%	-0.84%
533	Winkler County AD	17.86%	-0.02%	0.00%	0.01%	-0.88%	0.27%	0.01%	-0.61%
389	Winkler County HD	11.36%	0.05%	-0.41%	0.01%	-0.01%	0.03%	0.04%	-0.29%
937	Wintergarden ECD	4.93%	0.01%	0.00%	-0.01%	-0.09%	0.04%	0.01%	-0.04%
348	Wise County	13.31%	0.01%	-0.60%	0.00%	-0.03%	0.08%	0.04%	-0.50%
493	Wise County AD	15.26%	-0.07%	-0.45%	0.02%	-0.14%	0.15%	0.02%	-0.47%
349	Wood County	11.54%	-0.03%	-0.77%	0.00%	-0.16%	0.09%	0.04%	-0.83%
700	Wood County AD	16.77%	-0.12%	-0.25%	0.01%	0.00%	0.15%	0.01%	-0.20%
1084	Woodbine SUD	4.67%	0.00%	-0.14%	0.00%	0.01%	0.03%	0.01%	-0.09%
991	Wylie Northeast SUD	5.25%	0.02%	-0.12%	0.00%	0.00%	0.04%	0.01%	-0.05%
350	Yoakum County	6.60%	0.01%	-0.32%	0.02%	-0.24%	0.07%	0.03%	-0.43%
776	Yoakum County AD	9.23%	-0.10%	-0.01%	0.01%	-0.13%	0.08%	0.01%	-0.14%
351	Young County	8.66%	-0.05%	-0.30%	0.00%	-0.25%	0.11%	0.02%	-0.47%
352	Zapata County	13.18%	-0.04%	-0.51%	0.00%	0.02%	0.11%	0.04%	-0.38%
649	Zapata County AD	17.06%	-0.09%	-0.33%	0.00%	0.09%	0.12%	0.03%	-0.18%
935	Zapata Soil and WCD	4.49%	0.00%	0.00%	0.00%	0.07%	0.02%	0.01%	0.10%
353	Zavala County	12.23%	0.01%	-0.71%	0.00%	-0.16%	0.09%	0.05%	-0.72%
566	Zavala County AD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Appendix C Methodology and Termination Group Assignments

General

This appendix provides some additional technical comments with regard to this Investigation of Experience.

- All expected values are based on the December 31, 2020 actuarial valuation assumptions.

Data

All data was provided to us by TCDRS staff for annual valuations. We made the following edits prior to performing the experience study:

- Removed duplicate members to avoid double-counting. For retired mortality analysis each retiree was only counted once per participant type (e.g. member, beneficiary). For non-retired analyses each member was counted once within the same employer and participant type.
- Used default values for members with an invalid birth date or gender field.
- Active members prior to termination, death, or retirement. There often is some delay between a member's last day of work and the start day of the member's ultimate status. For example, a member might stop working and apply for a disability retirement, but not receive approval until later. In the interim the member may be reported as a vested former employee. In situations such as these we have made an adjustment to account for the delay in entering ultimate status so that it is treated as a direct decrement from active status.

Merit Salary Study

We studied the year-to-year increases based on the valuation data files. The merit increase was calculated as the total increase less the wage inflation for that year. Wage inflation was calculated as the ratio of the average salary from year to year, with an adjustment to account for changes in the average service level.

Study Period	Calculated Wage Inflation
2005-08	3.86%
2009-12	1.18%
2013-16	3.08%
2017-19	2.74%

Mortality Projection

For comparison of the proposed mortality rates with the expected rates, the mortality tables were projected to 2018, the approximate mid-point of the study period.

Disability

In the data, disabilities were not separately identified between occupational and non-occupational. Therefore, it was assumed that all disabilities who did not meet the 5-, 8-, or 10-year requirement were occupational. All others were assumed to be non-occupational.

Entry Age Groups

Entry date is calculated as valuation date less years and months of service. Groups are defined as follows:

- Entry Age 20: Entry age less than 30
- Entry Age 30: Entry age from 30 to 39
- Entry Age 40: Entry age from 40 to 49
- Entry Age 50: Entry age of 50 or greater

Termination Group Assignments

For each employer, a ratio of the actual-to-expected terminations (weighted by salary) was calculated. Actual and expected terminations were then weighted by service. Therefore, a termination with 20 years of service counted 10 times as much as a termination with 2 years of service.

Based on this ratio and the ratios from the 2013 and 2017 experience investigations, adjustments were made to the termination groups for some employers as shown on the following pages.

Recommended Termination Groups

Emp. No.	Employer Name	Contrib. Members	Weighted Terminations (in \$Thousands) ¹			Actual / Expected Ratio			Term Group	
			Actual	Expected by Group		Prior Study	Current Study	Proposed Group	Current	Proposed
				Current	Proposed					
638	Acton Municipal Utility District	25	1,070	912	912	192%	117%	117%	XLow	XLow
789	Agua Special Utility District	71	4,347	2,684	3,019	202%	162%	144%	Low	MidLow
615	Alamo Area Council of Governments	305	24,696	18,244	18,244	258%	135%	135%	High	High
916	Alliance Regional Water Authority	3	0	0	0	100%	N/A	N/A	Zero	Zero
100	Anderson County	255	11,078	10,895	10,895	138%	102%	102%	MidHigh	MidHigh
691	Anderson County Central Appraisal District	14	908	410	462	186%	221%	197%	Low	MidLow
101	Andrews County	188	12,488	10,048	10,048	99%	124%	124%	MidLow	MidLow
875	Andrews County Appraisal District	6	646	0	0	N/A	N/A	N/A	Zero	Zero
684	Angelina and Nacogdoches Counties WC & ID #1	3	52	0	0	100%	N/A	N/A	Zero	Zero
102	Angelina County	345	26,064	17,279	19,007	153%	151%	137%	Mid	MidHigh
502	Angelina County Appraisal District	20	868	565	646	204%	154%	134%	XLow	Low
576	Angleton Drainage District	9	0	283	283	0%	0%	0%	XLow	XLow
614	Aquilla Water Supply District - Hill County	14	53	255	255	81%	21%	21%	XLow	XLow
103	Aransas County	216	15,419	10,987	10,987	108%	140%	140%	MidHigh	MidHigh
459	Aransas County Appraisal District	10	1,558	296	296	125%	527%	527%	XLow	XLow
668	Aransas County Navigation District	16	992	0	203	N/A	N/A	489%	Zero	XLow
104	Archer County	61	1,866	1,891	1,891	262%	99%	99%	Low	Low
503	Archer County Appraisal District	2	334	90	90	0%	371%	371%	XLow	XLow
964	Ark-Tex Council of Governments	102	2,885	1,826	1,826	N/A	158%	158%	Low	Low
105	Armstrong County	24	1,890	550	619	403%	343%	305%	Low	MidLow
1011	Armstrong County Appraisal District	2	0	0	0	N/A	N/A	N/A	Zero	Zero
551	Atascosa Central Appraisal District	15	0	340	340	114%	0%	0%	Low	Low
106	Atascosa County	396	27,203	22,144	22,144	117%	123%	123%	MidHigh	MidHigh
950	Athens Municipal Water Authority	3	0	0	0	100%	N/A	N/A	Zero	Zero
107	Austin County	244	13,480	9,074	10,082	140%	149%	134%	MidLow	Mid
461	Austin County Appraisal District	16	357	434	434	26%	82%	82%	Low	Low
994	Austin County Emergency Communications District	1	0	0	0	100%	N/A	N/A	Zero	Zero
597	Bacliff Municipal Utility District	12	313	335	335	34%	93%	93%	Low	Low
108	Bailey County	104	3,344	3,213	3,213	115%	104%	104%	Mid	Mid
945	Ballinger Memorial Hospital District	113	3,719	3,490	3,490	167%	107%	107%	Low	Low
109	Bandera County	218	13,309	9,045	9,045	113%	147%	147%	Mid	Mid
918	Bastrop Central Appraisal District	19	1,330	448	448	0%	297%	297%	Low	Low
110	Bastrop County	543	43,979	29,322	29,322	108%	150%	150%	Mid	Mid
812	Bastrop County Emergency Services District #1	12	0	0	279	N/A	N/A	0%	Zero	XLow
915	Bastrop County Emergency Services District #2	11	0	0	101	N/A	N/A	0%	Zero	XLow
398	Bastrop County WCID 2	15	310	186	186	N/A	166%	166%	XLow	XLow
111	Baylor County	44	2,625	894	993	234%	294%	264%	MidLow	Mid
685	Baylor County Appraisal District	3	74	0	0	N/A	N/A	N/A	Zero	Zero
613	Bayview Irrigation District #11	3	108	108	94	103%	100%	114%	Low	XLow
690	Bayview Municipal Utility District	5	226	0	0	N/A	N/A	N/A	Zero	Zero
112	Bee County	195	10,717	6,417	7,001	378%	167%	153%	MidHigh	MidHigh
113	Bell County	1,230	47,042	66,075	66,075	100%	71%	71%	MidHigh	MidHigh
506	Bell County Appraisal District	48	1,610	2,376	2,376	41%	68%	68%	Low	Low
418	Bell County WCID #1	49	2,913	2,680	2,680	111%	109%	109%	Mid	Mid
378	Bell County WCID 3	8	601	190	190	N/A	317%	317%	XLow	XLow
708	Benbrook Water Authority	45	851	1,542	1,542	116%	55%	55%	Low	Low
472	Bexar Appraisal District	151	10,010	7,411	7,411	115%	135%	135%	Low	Low
114	Bexar County	5,552	222,873	276,570	276,570	116%	81%	81%	MidLow	MidLow
1083	Bexar County Emergency Service District 5	29	0	0	0	N/A	N/A	N/A	Low	Low
861	Bexar County Emergency Service District No.2	117	2,565	3,251	3,251	148%	79%	79%	Low	Low
373	Bexar County Emergency Services District #10	40	0	0	0	N/A	N/A	N/A	Low	Low
1080	Bexar County Emergency Services District #12	17	0	0	0	N/A	N/A	N/A	Low	Low
1001	Bexar County Emergency Services District #6	1	0	0	0	N/A	N/A	N/A	Zero	Zero
828	Bexar County Emergency Services District 7	46	3,902	2,324	2,614	200%	168%	149%	Low	MidLow
979	Bexar County Emergency Services District No. 8	14	307	268	268	896%	115%	115%	XLow	XLow
544	Bexar County WCID #10	7	732	331	331	151%	221%	221%	Low	Low
716	Bexar Metro 9-1-1 Network District	20	0	1,091	1,091	0%	0%	0%	Low	Low
737	Bexar-Medina-Atascosa WCID #1	25	1,024	979	979	137%	105%	105%	Low	Low
616	Bistone Municipal WSD - Limestone County	7	6	294	294	376%	2%	2%	Low	Low
115	Blanco County	77	2,799	2,210	2,210	185%	127%	127%	MidLow	MidLow
1016	Blanco County Emergency Services District No. 2	27	16	145	145	N/A	11%	11%	Low	Low
965	Bluebonnet Groundwater Conservation District	2	34	0	0	100%	N/A	N/A	Zero	Zero
116	Borden County	22	316	456	456	224%	69%	69%	MidLow	MidLow
525	Borden County Appraisal District	2	0	0	0	N/A	N/A	N/A	Zero	Zero
117	Bosque County	118	7,312	4,787	5,222	169%	153%	140%	MidHigh	High
521	Bosque County Central Appraisal District	7	96	200	200	584%	48%	48%	XLow	XLow
118	Bowie County	313	14,469	14,380	14,380	132%	101%	101%	MidHigh	MidHigh
119	Brazoria County	1,539	85,596	82,862	82,862	115%	103%	103%	MidLow	MidLow
508	Brazoria County Appraisal District	63	1,831	2,783	2,783	140%	66%	66%	Low	Low
413	Brazoria County Cons. and Reclamation Dist #3	36	164	1,629	1,426	32%	10%	11%	Low	XLow
424	Brazoria County Drainage District #4	65	2,428	3,879	3,879	80%	63%	63%	XLow	XLow
681	Brazoria County Drainage District #5	14	403	335	335	420%	120%	120%	XLow	XLow
1050	Brazoria County Emergency Services District No. 3	31	0	0	0	N/A	N/A	N/A	Low	Low
689	Brazos Central Appraisal District	29	2,257	1,191	1,191	73%	190%	190%	Low	Low
120	Brazos County	879	46,497	50,593	50,593	100%	92%	92%	Mid	Mid

Emp. No.	Employer Name	Contrib. Members	Weighted Terminations (in \$Thousands) ¹			Actual / Expected Ratio			Term Group	
			Actual	Expected by Group		Prior Study	Current Study	Proposed Group	Current	Proposed
				Current	Proposed					
600	Brazos County Emergency Communications District	44	1,956	2,863	2,863	82%	68%	68%	Low	Low
849	Brazos Regional Public Utility Agency	15	3,350	528	528	88%	634%	634%	Low	Low
744	Brazos River Authority	227	7,760	12,675	12,675	170%	61%	61%	Low	Low
967	Brazos Transit District	109	5,499	2,292	2,292	N/A	240%	240%	Low	Low
806	Brazos Valley Council of Governments	235	7,878	3,424	3,852	133%	230%	205%	Low	MidLow
809	Brazos Valley Groundwater Conservation District	3	0	0	0	N/A	N/A	N/A	Zero	Zero
121	Brewster County	84	10,907	3,725	3,725	202%	293%	293%	Mid	Mid
581	Brewster County Appraisal District	7	283	258	258	245%	110%	110%	XLow	XLow
745	Bright Star-Salem Special Utility District	10	113	0	0	N/A	N/A	N/A	Zero	Zero
122	Briscoe County	23	841	423	423	118%	199%	199%	Low	Low
1052	Brookeland Fresh Water Supply District	7	0	0	0	N/A	N/A	N/A	Zero	Zero
876	Brookesmith Special Utility District	13	209	535	535	145%	39%	39%	Low	Low
123	Brooks County	135	7,658	3,775	4,152	149%	203%	184%	Mid	MidHigh
554	Brookshire - Katy Drainage District	9	129	303	303	351%	43%	43%	XLow	XLow
522	Brookshire Municipal Water District	3	1,372	261	228	324%	526%	601%	Low	XLow
124	Brown County	192	10,477	7,161	7,161	153%	146%	146%	Mid	Mid
702	Brownsville Irrigation District	11	581	422	422	143%	138%	138%	Low	Low
1055	Brush Country Groundwater Conservation District	3	0	0	0	N/A	N/A	N/A	Zero	Zero
642	Brushy Creek MUD - Williamson County	115	4,261	3,150	3,543	249%	135%	120%	Low	MidLow
125	Burleson County	154	10,076	5,026	5,026	119%	200%	200%	MidHigh	MidHigh
978	Burleson County Appraisal District	8	1,032	332	332	109%	311%	311%	XLow	XLow
609	Burnet Central Appraisal District	18	1,783	584	584	91%	305%	305%	Low	Low
126	Burnet County	368	26,695	19,211	19,211	99%	139%	139%	MidHigh	MidHigh
127	Caldwell County	259	13,003	11,742	11,742	95%	111%	111%	MidHigh	MidHigh
718	Caldwell County Appraisal District	15	484	717	717	31%	67%	67%	Low	Low
128	Calhoun County	220	8,618	8,513	8,513	207%	101%	101%	Low	Low
709	Calhoun County Appraisal District	13	687	530	530	25%	130%	130%	Low	Low
788	Calhoun County E911 Emergency Communications District	1	0	0	0	100%	N/A	N/A	Zero	Zero
129	Callahan County	70	3,639	1,350	1,350	117%	269%	269%	MidLow	MidLow
542	Callahan County Appraisal District	5	0	117	117	50%	0%	0%	XLow	XLow
130	Cameron County	1,813	103,195	92,969	92,969	120%	111%	111%	Mid	Mid
618	Cameron County Appraisal District	62	673	2,701	2,701	124%	25%	25%	Low	Low
692	Cameron County Drainage District #1	25	139	493	493	71%	28%	28%	XLow	XLow
664	Cameron County Drainage District #3	30	394	732	732	114%	54%	54%	XLow	XLow
686	Cameron County Drainage District #5	2	0	0	0	100%	N/A	N/A	Zero	Zero
851	Cameron County Emergency Communication District	7	600	0	0	100%	N/A	N/A	Zero	Zero
462	Cameron County Irrigation District #2	28	1,372	1,273	1,273	166%	108%	108%	MidLow	MidLow
590	Cameron County Irrigation District #6	13	262	271	271	217%	97%	97%	Low	Low
900	Cameron County Regional Mobility Authority	19	409	0	386	N/A	N/A	106%	Zero	XLow
670	Camp Central Appraisal District	5	316	288	288	129%	110%	110%	XLow	XLow
131	Camp County	60	4,793	1,818	1,818	90%	264%	264%	Mid	Mid
367	Caney Creek Municipal Utility District	14	508	354	354	100%	144%	144%	XLow	XLow
379	Canyon Lake Community Library District	9	78	49	49	N/A	161%	161%	XLow	XLow
1021	Canyon Regional Water Authority	17	0	0	0	N/A	N/A	N/A	Low	Low
132	Carson County	71	3,423	2,139	2,139	76%	160%	160%	MidLow	MidLow
133	Cass County	151	7,994	5,592	5,592	110%	143%	143%	Mid	Mid
610	Cass County Appraisal District	7	806	344	344	206%	234%	234%	Low	Low
134	Castro County	70	3,087	2,004	2,227	175%	154%	139%	MidLow	Mid
719	Central Appraisal District of Bandera County	9	750	437	437	114%	171%	171%	XLow	XLow
635	Central Appraisal District of Johnson County	34	2,777	1,364	1,364	26%	204%	204%	Low	Low
602	Central Appraisal District of Taylor County	29	382	974	974	142%	39%	39%	XLow	XLow
862	Central Texas Groundwater Conservation District	7	2	0	0	100%	N/A	N/A	Zero	Zero
712	Central Texas Regional Mobility Authority	31	686	0	1,221	N/A	N/A	56%	Zero	XLow
648	Central WCID - Angelina County	4	305	0	0	N/A	N/A	N/A	Zero	Zero
135	Chambers County	538	17,145	19,197	19,197	159%	89%	89%	MidLow	MidLow
531	Chambers County Appraisal District	11	688	607	607	181%	113%	113%	Low	Low
548	Chambers County Public Hospital District	100	6,481	7,333	7,333	53%	88%	88%	MidLow	MidLow
136	Cherokee County	246	13,038	10,153	10,153	133%	128%	128%	Mid	Mid
137	Childress County	68	4,000	2,410	2,678	157%	166%	149%	MidLow	Mid
511	Childress County Appraisal District	2	0	0	0	100%	N/A	N/A	Zero	Zero
582	Childress County Hospital District	268	19,183	17,047	17,047	134%	113%	113%	MidLow	MidLow
138	Clay County	75	7,970	3,153	3,153	65%	253%	253%	MidLow	MidLow
485	Clay County Appraisal District	4	942	136	119	705%	694%	793%	Low	XLow
703	Coastal Bend Groundwater Conservation District	2	0	0	0	100%	N/A	N/A	Zero	Zero
722	Coastal Plains Groundwater Conservation District	1	0	0	0	100%	N/A	N/A	Zero	Zero
139	Cochran County	68	3,412	2,252	2,252	110%	152%	152%	MidLow	MidLow
477	Cochran County Appraisal District	3	278	125	125	0%	222%	222%	XLow	XLow
751	Coke Central Appraisal District	2	0	0	0	100%	N/A	N/A	Zero	Zero
140	Coke County	37	770	722	722	178%	107%	107%	Low	Low
946	Coke County Soil and Water Conservation District #219	1	0	0	0	100%	N/A	N/A	Zero	Zero
141	Coleman County	51	2,374	1,249	1,249	73%	190%	190%	Low	Low
142	Collin County	1,761	111,364	96,184	108,207	129%	116%	103%	Low	MidLow
457	Collin County Central Appraisal District	132	7,436	6,705	6,705	37%	111%	111%	Low	Low
143	Collingsworth County	48	730	1,021	1,021	164%	71%	71%	Mid	Mid
961	Collingsworth County Appraisal District	3	80	0	0	100%	N/A	N/A	Zero	Zero
144	Colorado County	205	10,302	6,495	6,495	126%	159%	159%	Mid	Mid

Emp. No.	Employer Name	Contrib. Members	Weighted Terminations (in \$Thousands) ¹			Actual / Expected Ratio			Term Group	
			Actual	Expected by Group		Prior Study	Current Study	Proposed Group	Current	Proposed
				Current	Proposed					
623	Comal Appraisal District	28	778	1,354	1,354	196%	57%	57%	Low	Low
145	Comal County	744	42,469	40,474	40,474	113%	105%	105%	Mid	Mid
775	Comal County Emergency Services District #3	71	5,458	4,377	4,377	87%	125%	125%	Low	Low
996	Comanche Central Appraisal District	8	0	0	0	N/A	N/A	N/A	XLow	XLow
146	Comanche County	127	6,662	4,777	4,777	96%	139%	139%	MidHigh	MidHigh
762	Combined Consumers Special Utility District	16	163	838	838	205%	19%	19%	Low	Low
366	Concho Central Appraisal District	3	521	0	0	100%	N/A	N/A	Zero	Zero
147	Concho County	48	2,664	1,380	1,380	93%	193%	193%	Mid	Mid
636	Concho County Hospital District	66	3,354	2,817	2,817	98%	119%	119%	Low	Low
759	Concho Valley Council of Governments	248	12,880	4,251	4,783	242%	303%	269%	Low	MidLow
148	Cooke County	241	20,286	15,313	15,313	127%	132%	132%	MidHigh	MidHigh
487	Cooke County Appraisal District	17	272	432	432	176%	63%	63%	Low	Low
149	Coryell County	214	11,449	7,270	7,270	128%	157%	157%	Low	Low
150	Cottle County	33	292	337	337	232%	87%	87%	Low	Low
727	Cow Creek Groundwater Conservation District	4	0	0	0	N/A	N/A	N/A	Zero	Zero
151	Crane County	64	4,495	1,937	2,214	126%	232%	203%	XLow	Low
392	Crane County Appraisal District	1	0	0	0	N/A	N/A	N/A	Zero	Zero
757	Crane County Hospital District	45	6,438	2,878	3,237	134%	224%	199%	Low	MidLow
152	Crockett County	183	5,188	7,123	7,123	154%	73%	73%	MidHigh	MidHigh
907	Crockett County Appraisal District	2	0	0	0	100%	N/A	N/A	Zero	Zero
409	Crockett County WCID #1	9	161	268	268	184%	60%	60%	Low	Low
153	Crosby County	51	2,531	1,059	1,192	244%	239%	212%	Low	MidLow
532	Crosby County Appraisal District	3	225	66	66	181%	340%	340%	XLow	XLow
603	Crosby Municipal Utility District	11	322	655	655	393%	49%	49%	Low	Low
710	Cross Roads Special Utility District	5	751	0	0	N/A	N/A	N/A	Zero	Zero
902	Crystal Clear Special Utility District	28	3,717	820	820	0%	453%	453%	Low	Low
154	Culberson County	86	3,021	2,436	2,436	73%	124%	124%	MidLow	MidLow
1000	Cypress Springs Special Utility District	21	369	237	237	N/A	155%	155%	Low	Low
155	Dallam County	75	3,767	3,095	3,095	186%	122%	122%	MidLow	MidLow
771	Dallam County Appraisal District	4	0	0	0	100%	N/A	N/A	Zero	Zero
467	Dallas Central Appraisal District	238	9,278	11,718	11,718	89%	79%	79%	MidLow	MidLow
156	Dallas County	6,807	490,395	491,247	491,247	103%	100%	100%	Mid	Mid
430	Dallas County Park Cities Municipal Utility District	24	930	710	710	155%	131%	131%	XLow	XLow
157	Dawson County	113	7,120	2,893	3,307	293%	246%	215%	XLow	Low
463	Dawson County Central Appraisal District	5	172	42	42	332%	411%	411%	XLow	XLow
158	Deaf Smith County	121	5,037	4,523	4,523	188%	111%	111%	MidLow	MidLow
578	Deaf Smith County Hospital District	185	23,364	12,990	12,990	146%	180%	180%	High	High
363	Deep East Texas Council of Governments	61	1,747	1,026	1,026	N/A	170%	170%	Low	Low
159	Delta County	53	2,580	1,745	1,745	61%	148%	148%	Mid	Mid
855	Delta County Appraisal District	4	0	0	0	100%	N/A	N/A	Zero	Zero
734	Delta County Municipal Utility District	4	0	0	0	100%	N/A	N/A	Zero	Zero
732	Delta Lake Irrigation District	52	3,309	1,230	1,230	120%	269%	269%	Low	Low
583	Denco Area 9-1-1 District - Denton County	12	1,916	581	581	136%	330%	330%	XLow	XLow
482	Denton Central Appraisal District	70	5,079	4,638	4,638	36%	110%	110%	Low	Low
160	Denton County	1,826	105,431	107,176	107,176	107%	98%	98%	Mid	Mid
1005	Denton County Fresh Water Supply District #10	18	268	171	171	N/A	156%	156%	Low	Low
758	Denton County Fresh Water Supply District 1A	25	2,177	1,330	1,496	437%	164%	145%	Low	MidLow
783	Denton County Transportation Authority	32	924	2,291	2,291	309%	40%	40%	Low	Low
161	DeWitt County	152	6,571	5,291	5,291	221%	124%	124%	Low	Low
466	DeWitt County Appraisal District	9	756	408	408	276%	185%	185%	Low	Low
162	Dickens County	34	880	716	716	198%	123%	123%	MidLow	MidLow
764	Dickens County Appraisal District	2	0	0	0	100%	N/A	N/A	Zero	Zero
163	Dimmit County	167	8,569	7,715	7,715	167%	111%	111%	Mid	Mid
164	Donley County	43	1,321	961	961	7%	137%	137%	Mid	Mid
165	Duval County	156	19,074	5,713	6,347	202%	334%	301%	MidLow	Mid
929	Duval County Appraisal District	5	929	0	0	N/A	N/A	N/A	Zero	Zero
880	Duval County Groundwater Conservation District	2	0	0	0	100%	N/A	N/A	Zero	Zero
1062	East Central Special Utility District	17	0	0	0	N/A	N/A	N/A	Low	Low
879	East Fork Special Utility District	7	497	295	295	35%	169%	169%	XLow	XLow
376	East Harris County Emerg. Services Joint Powers Board	15	574	430	430	N/A	134%	134%	Low	Low
825	East Medina County Special Utility District	13	871	350	350	150%	249%	249%	XLow	XLow
166	Eastland County	105	5,430	4,693	4,693	84%	116%	116%	MidHigh	MidHigh
593	Eastland County Appraisal District	8	210	359	314	20%	58%	67%	Low	XLow
167	Ector County	708	51,066	37,230	37,230	112%	137%	137%	Mid	Mid
939	Ector County Appraisal District	33	2,388	1,106	1,106	65%	216%	216%	Low	Low
580	Ector County Hospital District	1,944	215,305	163,565	163,565	130%	132%	132%	High	High
448	Edwards Aquifer Authority - Bexar County	92	10,978	6,175	6,175	96%	178%	178%	MidLow	MidLow
628	Edwards Central Appraisal District	3	88	0	0	N/A	N/A	N/A	Zero	Zero
168	Edwards County	44	3,010	1,337	1,485	226%	225%	203%	MidLow	Mid
819	El Paso Central Appraisal District	133	2,917	6,219	6,219	83%	47%	47%	Low	Low
170	El Paso County	2,961	151,475	163,164	163,164	107%	93%	93%	Low	Low
567	El Paso County 9-1-1 District	13	0	714	714	317%	0%	0%	Low	Low
1013	El Paso County Emergency Services District #1	12	25	47	47	N/A	53%	53%	XLow	XLow
936	El Paso County Emergency Services District #2	30	603	968	968	101%	62%	62%	Low	Low
541	El Paso County Hospital District	3,025	189,557	232,278	232,278	100%	82%	82%	High	High
1004	El Paso County Water Improvement District No. 1	128	113	2,102	2,102	N/A	5%	5%	Low	Low
963	El Paso Mental Health and Mental Retardation	705	24,364	18,462	18,462	N/A	132%	132%	Low	Low

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			Actual	Expected by Group		Prior Study	Current Study	Proposed Group	Current	Proposed
				Current	Proposed					
395	Electra Housing Authority	4	308	0	0	N/A	N/A	N/A	Zero	Zero
976	Ellis Appraisal District	34	679	961	961	219%	71%	71%	Low	Low
169	Ellis County	546	49,709	33,982	33,982	105%	146%	146%	MidHigh	MidHigh
859	Emerald Bay Municipal Utility District	2	172	0	0	N/A	N/A	N/A	Zero	Zero
624	Emergency Communication District of Ector County	4	70	0	0	N/A	N/A	N/A	Zero	Zero
171	Erath County	214	14,999	8,550	8,550	89%	175%	175%	Mid	Mid
850	Erath County Appraisal District	14	0	612	612	299%	0%	0%	Low	Low
172	Falls County	120	6,248	4,769	4,769	124%	131%	131%	MidHigh	MidHigh
563	Falls County Appraisal District	8	438	228	228	201%	192%	192%	Low	Low
644	Fannin Central Appraisal District	18	1,396	887	887	63%	157%	157%	Low	Low
173	Fannin County	150	9,414	4,855	5,394	145%	194%	175%	MidLow	Mid
174	Fayette County	221	8,843	7,975	7,975	140%	111%	111%	Low	Low
951	Fern Bluff Municipal Utility District	9	79	242	242	0%	33%	33%	XLow	XLow
175	Fisher County	69	2,655	1,726	1,726	187%	154%	154%	Mid	Mid
432	Fisher County Hospital District	71	4,856	4,340	4,340	101%	112%	112%	Mid	Mid
176	Floyd County	65	2,972	1,982	1,982	69%	150%	150%	MidLow	MidLow
360	Foard County	24	162	608	608	0%	27%	27%	Low	Low
474	Fort Bend Central Appraisal District	120	7,837	4,642	4,642	70%	169%	169%	XLow	XLow
178	Fort Bend County	3,014	143,459	145,309	145,309	117%	99%	99%	Low	Low
390	Fort Bend County Emergency Services District #4	41	99	394	394	N/A	25%	25%	Low	Low
1063	Fort Bend County Emergency Services District #7	34	0	0	0	N/A	N/A	N/A	Low	Low
974	Fort Bend County Emergency Services District 2	77	2,188	2,512	2,512	35%	87%	87%	Low	Low
782	Fort Bend County WCID #2	39	223	1,686	1,686	135%	13%	13%	Low	Low
932	Fort Clark Municipal Utility District	6	517	234	234	93%	221%	221%	XLow	XLow
860	Fort Griffin Special Utility District	6	157	0	0	N/A	N/A	N/A	Zero	Zero
769	Four Way Special Utility District	6	0	0	0	N/A	N/A	N/A	Zero	Zero
179	Franklin County	78	3,078	2,768	2,768	122%	111%	111%	MidLow	MidLow
1038	Freer Water Control & Improvement District	5	0	0	0	N/A	N/A	N/A	XLow	XLow
180	Freestone County	132	5,269	3,575	3,575	155%	147%	147%	MidLow	MidLow
693	Freestone County Appraisal District	15	869	446	446	74%	195%	195%	XLow	XLow
181	Frio County	127	11,895	5,139	5,710	138%	231%	208%	MidLow	Mid
509	Frio County Appraisal District	9	0	223	223	178%	0%	0%	Low	Low
182	Gaines County	173	13,880	6,449	6,449	112%	215%	215%	XLow	XLow
761	Gaines County Appraisal District	7	0	100	100	372%	0%	0%	XLow	XLow
546	Galveston Central Appraisal District	45	1,296	1,570	1,570	60%	83%	83%	MidLow	MidLow
183	Galveston County	1,250	93,617	76,517	84,168	126%	122%	111%	Mid	MidHigh
547	Galveston County Consolidated Drainage District	10	291	511	447	80%	57%	65%	Low	XLow
464	Galveston County Drainage District #1	14	221	390	390	225%	57%	57%	XLow	XLow
433	Galveston County Drainage District #2	9	924	189	189	0%	489%	489%	XLow	XLow
589	Galveston County Emergency Communication Dist	5	0	250	250	0%	0%	0%	XLow	XLow
821	Galveston County Fresh Water Supply District #6	6	74	263	263	202%	28%	28%	XLow	XLow
752	Galveston County Health District	313	27,555	14,371	16,027	296%	192%	172%	MidLow	Mid
1020	Galveston County WCID No. 8	10	74	147	147	N/A	50%	50%	XLow	XLow
407	Galveston County WCID #1	42	1,136	2,282	2,282	140%	50%	50%	Mid	Mid
473	Garza Central Appraisal District	3	0	35	35	N/A	0%	0%	XLow	XLow
184	Garza County	73	5,172	2,640	2,933	185%	196%	176%	MidLow	Mid
908	Garza County Health Care District	1	0	0	0	100%	N/A	N/A	Zero	Zero
885	Gillespie Central Appraisal District	13	661	519	519	374%	127%	127%	XLow	XLow
185	Gillespie County	170	6,736	5,430	5,430	129%	124%	124%	Low	Low
955	Gillespie County Soil and Water Conservation District	1	0	0	0	100%	N/A	N/A	Zero	Zero
186	Glasscock County	43	2,234	1,914	1,914	56%	117%	117%	MidLow	MidLow
942	Glasscock County Appraisal District	2	210	0	0	100%	N/A	N/A	Zero	Zero
187	Goliad County	85	6,443	3,773	4,192	223%	171%	154%	MidLow	Mid
498	Gonzales Central Appraisal District	12	327	338	338	32%	97%	97%	XLow	XLow
188	Gonzales County	156	7,951	8,512	8,512	95%	93%	93%	Mid	Mid
886	Graham Regional Health Center	137	15,483	6,572	7,393	283%	236%	209%	Low	MidLow
189	Gray County	125	13,218	5,757	6,332	174%	230%	209%	Mid	MidHigh
518	Gray County Appraisal District	7	84	281	281	305%	30%	30%	Low	Low
475	Grayson Central Appraisal District	35	1,512	2,010	2,010	116%	75%	75%	MidLow	MidLow
190	Grayson County	569	42,750	34,316	34,316	117%	125%	125%	Mid	Mid
528	Greater Harris County 9-1-1 Emergency Network	44	2,176	2,715	2,715	102%	80%	80%	XLow	XLow
429	Greenbelt Mun. & Ind. Water Authority - Donley County	11	471	308	308	57%	153%	153%	Low	Low
191	Gregg County	627	38,978	28,163	28,163	106%	138%	138%	Mid	Mid
192	Grimes County	201	8,607	7,219	7,219	51%	119%	119%	Mid	Mid
483	Grimes County Appraisal District	11	79	464	464	265%	17%	17%	XLow	XLow
587	Guadalupe Appraisal District	35	536	1,116	977	74%	48%	55%	Low	XLow
193	Guadalupe County	612	36,876	34,696	34,696	94%	106%	106%	Mid	Mid
380	Guadalupe County Groundwater Conservation District	2	0	0	0	N/A	N/A	N/A	Zero	Zero
388	Guadalupe-Blanco River Authority	197	0	0	0	N/A	N/A	N/A	Low	Low
526	Gulf Coast Water Authority - Galveston County	91	4,454	3,767	3,767	247%	118%	118%	Low	Low
194	Hale County	163	13,711	7,769	7,769	129%	176%	176%	Mid	Mid
195	Hall County	45	1,533	905	996	165%	169%	154%	Mid	MidHigh
787	Hall County Appraisal District	3	0	0	0	100%	N/A	N/A	Zero	Zero
196	Hamilton County	56	3,579	2,159	2,355	191%	166%	152%	MidHigh	High
1071	Hamilton County Appraisal District	4	0	0	0	N/A	N/A	N/A	Zero	Zero

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			Actual	Expected by Group		Prior Study	Current Study	Proposed Group	Current	Proposed
				Current	Proposed					
197	Hansford County	48	1,265	1,230	1,230	73%	103%	103%	MidLow	MidLow
585	Hansford County Hospital District	195	7,688	11,593	11,593	152%	66%	66%	High	High
198	Hardeman County	72	3,479	2,017	2,218	139%	173%	157%	Mid	MidHigh
199	Hardin County	270	14,854	10,300	11,444	141%	144%	130%	MidLow	Mid
527	Hardin County Appraisal District	14	382	563	563	0%	68%	68%	Low	Low
887	Hardin County Emergency Services District # 2	40	1,283	416	416	N/A	309%	309%	Low	Low
571	Harlingen Irrigation District Cameron County #1	45	242	1,327	1,327	88%	18%	18%	Low	Low
200	Harris County	19,401	858,468	960,079	960,079	113%	89%	89%	Low	Low
598	Harris County Appraisal District	604	28,520	37,513	37,513	81%	76%	76%	MidLow	MidLow
382	Harris County Emergency Services District #24	75	1,357	2,035	2,035	N/A	67%	67%	Low	Low
888	Harris County Emergency Services District #29	81	786	1,124	1,124	N/A	70%	70%	Low	Low
944	Harris County Emergency Services District #48	176	5,689	4,751	4,751	N/A	120%	120%	Low	Low
835	Harris County Emergency Services District #50	94	2,068	5,613	5,613	113%	37%	37%	Low	Low
1064	Harris County Emergency Services District #7	143	0	0	0	N/A	N/A	N/A	Low	Low
374	Harris County Emergency Services District 10	89	1,500	2,654	2,654	N/A	57%	57%	Low	Low
985	Harris County Emergency Services District 12	38	3,273	1,341	1,533	141%	244%	214%	XLow	Low
975	Harris County Emergency Services District 17	75	370	1,420	1,420	N/A	26%	26%	Low	Low
988	Harris County Emergency Services District 9	365	2,420	0	33	100%	N/A	7291%	Zero	XLow
842	Harris County Emergency Services District No. 13	104	216	0	1,168	100%	N/A	18%	Zero	XLow
948	Harris County Emergency Services District No. 46	97	3,606	0	1,804	100%	N/A	200%	Zero	XLow
364	Harris County Fresh Water Supply District 61	19	0	181	181	N/A	0%	0%	Low	Low
797	Harris County Housing Authority	34	3,107	1,504	1,692	177%	207%	184%	Low	MidLow
903	Harris County Sports & Convention Corporation	7	0	262	262	0%	0%	0%	XLow	XLow
569	Harris County WCID #1	12	122	447	447	246%	27%	27%	Low	Low
877	Harris County WCID #36	13	1,030	838	838	0%	123%	123%	Low	Low
625	Harris County WCID #50	6	137	338	296	60%	40%	46%	Low	XLow
201	Harrison County	318	20,729	11,016	12,240	178%	188%	169%	MidLow	Mid
202	Hartley County	32	635	914	914	156%	69%	69%	Low	Low
520	Hartley County Appraisal District	3	1,006	154	154	0%	653%	653%	XLow	XLow
203	Haskell County	52	1,565	1,423	1,423	116%	110%	110%	Mid	Mid
552	Haskell Memorial Hospital District	94	4,583	3,540	3,540	199%	129%	129%	Mid	Mid
204	Hays County	1,046	60,998	56,171	56,171	122%	109%	109%	Mid	Mid
878	Hays County Emergency Services District #5	44	3,725	2,646	2,646	32%	141%	141%	Low	Low
799	Hays County Emergency Services District #6	35	89	1,920	1,920	220%	5%	5%	Low	Low
826	Hays County Emergency Services District #8	55	3,630	3,951	3,951	36%	92%	92%	Low	Low
943	Heart of Texas Council of Governments	29	836	1,035	1,035	127%	81%	81%	Low	Low
205	Hemphill County	59	6,469	2,394	2,736	268%	270%	236%	XLow	Low
640	Hemphill County Appraisal District	3	88	0	0	N/A	N/A	N/A	Zero	Zero
529	Hemphill County Hospital District	177	9,287	8,503	8,503	135%	109%	109%	MidLow	MidLow
839	Hemphill County Underground Water Conservation District	3	284	0	0	100%	N/A	N/A	Zero	Zero
206	Henderson County	388	27,545	16,441	16,441	105%	168%	168%	MidLow	MidLow
746	Henderson County 9-1-1 Communications District	1	0	0	0	100%	N/A	N/A	Zero	Zero
704	Henderson County Appraisal District	25	647	874	765	0%	74%	85%	Low	XLow
1073	Hickory Creek Special Utility District	11	0	0	0	N/A	N/A	N/A	Low	Low
414	Hidalgo and Cameron Counties Irrigation District #9	33	1,255	1,108	1,108	120%	113%	113%	Low	Low
207	Hidalgo County	3,215	156,849	163,329	163,329	105%	96%	96%	Mid	Mid
516	Hidalgo County Appraisal District	98	2,432	3,715	3,715	65%	65%	65%	Low	Low
401	Hidalgo County Drainage District #1	171	5,310	5,402	5,402	95%	98%	98%	Low	Low
713	Hidalgo County Irrigation District #1	22	124	344	344	167%	36%	36%	Low	Low
438	Hidalgo County Irrigation District #2	37	419	1,151	1,151	89%	36%	36%	XLow	XLow
486	Hidalgo County Irrigation District #6	20	1,186	459	509	566%	259%	233%	MidLow	Mid
992	Hidalgo Municipal Utility District #1	8	746	0	0	100%	N/A	N/A	Zero	Zero
674	High Plains Underground Water Conservation District # 1	16	76	912	912	650%	8%	8%	Low	Low
1019	High Point Special Utility District	7	0	99	99	N/A	0%	0%	XLow	XLow
208	Hill County	218	11,723	7,918	8,798	184%	148%	133%	MidLow	Mid
209	Hockley County	121	8,871	3,578	4,089	195%	248%	217%	XLow	Low
728	Hockley County Appraisal District	7	0	222	222	21%	0%	0%	XLow	XLow
971	Hood Central Appraisal District	16	49	773	676	0%	6%	7%	Low	XLow
210	Hood County	358	20,504	16,447	16,447	135%	125%	125%	MidHigh	MidHigh
211	Hopkins County	218	13,619	8,377	9,214	161%	163%	148%	Mid	MidHigh
661	Hopkins County Appraisal District	9	272	291	291	204%	93%	93%	XLow	XLow
1029	Housing Authority of Starr County	6	0	0	0	N/A	N/A	N/A	XLow	XLow
909	Housing Authority of the City of Edinburg Texas	25	3,079	893	1,004	295%	345%	307%	Low	MidLow
1036	Housing Authority of the City of Kirbyville	7	0	0	0	N/A	N/A	N/A	XLow	XLow
1003	Housing Authority of the City of Knox City	3	222	0	0	N/A	N/A	N/A	Zero	Zero
917	Housing Authority of the City of Mercedes Texas	17	437	601	601	155%	73%	73%	Low	Low
1082	Housing Authority of the City of Mission	26	0	0	0	N/A	N/A	N/A	Low	Low
1002	Housing Authority of the City of Munday	6	93	0	0	N/A	N/A	N/A	Zero	Zero
1010	Housing Authority of Travis County	20	92	372	372	N/A	25%	25%	Low	Low
212	Houston County	163	5,387	4,532	4,532	111%	119%	119%	MidHigh	MidHigh
694	Houston County Appraisal District	10	60	181	181	0%	33%	33%	XLow	XLow
213	Howard County	181	9,231	7,260	7,260	144%	127%	127%	MidLow	MidLow
1086	Howard County Appraisal District	6	0	0	0	N/A	N/A	N/A	XLow	XLow
214	Hudspeth County	118	3,750	3,405	3,405	110%	110%	110%	MidHigh	MidHigh
215	Hunt County	373	21,807	21,590	21,590	134%	101%	101%	MidHigh	MidHigh
749	Hunt County Appraisal District	23	1,145	1,187	1,187	81%	96%	96%	Low	Low

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			Actual	Expected by Group		Prior Study	Current Study	Proposed Group	Current	Proposed
				Current	Proposed					
1043	Hurst Creek Municipal Utility District	12	0	0	0	N/A	N/A	N/A	Low	Low
216	Hutchinson County	122	9,077	5,408	6,085	166%	168%	149%	Low	MidLow
778	Hutchinson County Appraisal District	5	254	239	239	0%	106%	106%	XLow	XLow
711	Iraan General Hospital District	52	9,171	3,542	3,542	103%	259%	259%	Low	Low
217	Irion County	41	1,311	1,489	1,489	79%	88%	88%	MidLow	MidLow
779	Irion County Appraisal District	2	0	0	0	N/A	N/A	N/A	Zero	Zero
218	Jack County	76	5,208	2,499	2,499	113%	208%	208%	Mid	Mid
592	Jack County Appraisal District	4	715	91	80	0%	784%	896%	Low	XLow
219	Jackson County	112	7,283	4,350	4,350	90%	167%	167%	MidLow	MidLow
770	Jackson County Appraisal District	9	270	338	338	242%	80%	80%	XLow	XLow
441	Jackson County County-Wide Drainage District	9	220	186	186	85%	118%	118%	XLow	XLow
972	Jackson County Emergency Services District No. 3	7	0	363	363	100%	0%	0%	XLow	XLow
220	Jasper County	176	13,935	8,641	8,641	74%	161%	161%	Mid	Mid
393	Jasper County Appraisal District	13	256	165	165	N/A	155%	155%	Low	Low
657	Jasper County WCID #1	4	0	140	140	0%	0%	0%	XLow	XLow
221	Jeff Davis County	34	2,027	700	787	324%	290%	258%	Low	MidLow
810	Jefferson Central Appraisal District	40	835	1,285	1,124	5%	65%	74%	Low	XLow
222	Jefferson County	1,145	83,368	57,905	57,905	86%	144%	144%	Low	Low
404	Jefferson County Drainage District #3	8	166	109	109	200%	152%	152%	XLow	XLow
408	Jefferson County Drainage District #6	85	158	5,004	4,378	45%	3%	4%	Low	XLow
405	Jefferson County Drainage District #7	77	1,105	4,119	4,119	0%	27%	27%	XLow	XLow
451	Jefferson County WCID #10	9	773	403	403	133%	192%	192%	Low	Low
223	Jim Hogg County	121	4,785	2,644	2,644	90%	181%	181%	MidLow	MidLow
680	Jim Hogg County Appraisal District	4	775	0	0	N/A	N/A	N/A	Zero	Zero
656	Jim Hogg County Emergency Services District #1	1	0	0	0	100%	N/A	N/A	Zero	Zero
641	Jim Hogg County WCID #2	13	54	301	301	436%	18%	18%	XLow	XLow
224	Jim Wells County	261	13,563	9,443	10,387	167%	144%	131%	Mid	MidHigh
225	Johnson County	589	28,318	28,735	28,735	96%	99%	99%	Mid	Mid
741	Jonah Water Special Utility District	32	1,405	1,341	1,341	298%	105%	105%	Low	Low
226	Jones County	93	6,116	4,076	4,483	163%	150%	136%	Mid	MidHigh
496	Jones County Appraisal District	6	0	182	182	0%	0%	0%	XLow	XLow
227	Karnes County	197	15,773	7,114	8,003	213%	222%	197%	Low	MidLow
524	Karnes County Appraisal District	5	427	244	244	0%	175%	175%	XLow	XLow
455	Karnes County Hospital District	143	5,376	9,326	9,326	96%	58%	58%	MidLow	MidLow
228	Kaufman County	592	33,511	32,131	32,131	145%	104%	104%	MidHigh	MidHigh
662	Kaufman County Appraisal District	21	4,373	924	1,040	136%	473%	421%	Low	MidLow
671	Kendall Appraisal District	13	1,090	545	545	107%	200%	200%	Low	Low
229	Kendall County	285	19,332	14,768	14,768	121%	131%	131%	Mid	Mid
619	Kendall County WCID #1	7	102	226	226	64%	45%	45%	XLow	XLow
230	Kenedy County	51	4,601	1,678	1,678	130%	274%	274%	XLow	XLow
854	Kenedy County Central Appraisal District	2	0	0	0	100%	N/A	N/A	Zero	Zero
906	Kenedy County Fire & Emergency Services District No. 1	1	182	0	0	100%	N/A	N/A	Zero	Zero
231	Kent County	101	6,042	2,325	2,616	136%	260%	231%	Low	MidLow
594	Kent County Tax Appraisal District	2	0	0	0	100%	N/A	N/A	Zero	Zero
232	Kerr County	301	23,808	19,075	19,075	117%	125%	125%	MidHigh	MidHigh
956	Kerr County Soil and Water Conservation District	2	135	0	0	100%	N/A	N/A	Zero	Zero
653	Kerr Emergency 9-1-1 Network	2	0	0	0	100%	N/A	N/A	Zero	Zero
233	Kimble County	49	2,827	1,527	1,718	212%	185%	165%	Low	MidLow
234	King County	19	85	466	466	162%	18%	18%	Low	Low
755	King County Appraisal District	2	33	0	0	100%	N/A	N/A	Zero	Zero
235	Kinney County	70	2,947	3,114	3,114	140%	95%	95%	MidHigh	MidHigh
579	Kinney County Appraisal District	3	0	43	43	0%	0%	0%	XLow	XLow
236	Kleberg County	264	10,646	9,981	9,981	155%	107%	107%	MidHigh	MidHigh
237	Knox County	46	2,631	1,204	1,204	94%	219%	219%	MidLow	MidLow
241	La Salle County	271	23,760	14,445	14,445	111%	164%	164%	MidHigh	MidHigh
540	Laguna Madre Water District - Cameron County	79	3,754	2,817	2,817	132%	133%	133%	Low	Low
867	Lake Cities Municipal Utility Authority	30	3,158	1,182	1,182	89%	267%	267%	Low	Low
1074	Lake Fork Special Utility District	8	0	0	0	N/A	N/A	N/A	XLow	XLow
874	Lake Kiowa Special Utility District	6	52	0	0	100%	N/A	N/A	Zero	Zero
514	Lakeway Municipal Utility District - Travis County	27	1,917	1,525	1,525	7%	126%	126%	MidLow	MidLow
238	Lamar County	201	9,541	9,917	9,917	120%	96%	96%	MidHigh	MidHigh
808	Lamar County Appraisal District	18	773	425	425	42%	182%	182%	Low	Low
239	Lamb County	96	4,947	3,334	3,334	192%	148%	148%	MidLow	MidLow
650	Lampasas Central Appraisal District	6	565	197	197	330%	287%	287%	XLow	XLow
240	Lampasas County	97	4,629	3,745	3,745	106%	124%	124%	MidLow	MidLow
731	LaSalle County Appraisal District	10	2,439	0	0	N/A	N/A	N/A	Zero	Zero
439	Lavaca - Navidad River Authority - Jackson County	81	626	4,055	3,548	73%	15%	18%	Low	XLow
242	Lavaca County	210	5,640	5,835	5,835	119%	97%	97%	Low	Low
977	Lee Central Appraisal District	8	692	182	182	858%	380%	380%	XLow	XLow
243	Lee County	120	4,160	3,628	3,628	159%	115%	115%	XLow	XLow
244	Leon County	142	5,772	3,808	4,231	145%	152%	136%	MidLow	Mid
468	Leon County Central Appraisal District	9	1,346	233	233	0%	577%	577%	Low	Low
245	Liberty County	456	22,518	18,441	18,441	82%	122%	122%	MidHigh	MidHigh
481	Liberty County Central Appraisal District	35	2,538	1,892	1,892	97%	134%	134%	Low	Low
246	Limestone County	189	12,886	8,241	8,241	155%	156%	156%	Mid	Mid
695	Limestone County Appraisal District	11	46	196	196	212%	23%	23%	XLow	XLow

Emp. No.	Employer Name	Contrib. Members	Weighted Terminations (in \$Thousands) ¹			Actual / Expected Ratio			Term Group	
			Actual	Expected by Group		Prior Study	Current Study	Proposed Group	Current	Proposed
				Current	Proposed					
247	Lipscomb County	50	1,637	1,532	1,532	223%	107%	107%	Low	Low
248	Live Oak County	134	8,494	5,185	5,185	78%	164%	164%	Mid	Mid
591	Live Oak County Appraisal District	7	327	183	183	142%	179%	179%	XLow	XLow
780	Llano Central Appraisal District	11	241	247	247	N/A	98%	98%	XLow	XLow
249	Llano County	149	8,243	5,315	5,315	125%	155%	155%	Mid	Mid
250	Loving County	30	927	836	836	79%	111%	111%	XLow	XLow
513	Loving County Appraisal District	3	72	0	0	N/A	N/A	N/A	Zero	Zero
756	Lower Trinity Groundwater Conservation District	1	0	0	0	100%	N/A	N/A	Zero	Zero
714	Lower Valley Water District	113	7,155	4,028	4,532	194%	178%	158%	Low	MidLow
499	Lubbock Central Appraisal District	47	2,767	1,773	1,773	111%	156%	156%	MidLow	MidLow
251	Lubbock County	1,188	82,961	78,007	78,007	94%	106%	106%	MidHigh	MidHigh
425	Lubbock County WCID #1	18	2,262	666	750	157%	339%	302%	Low	MidLow
558	Lubbock Emergency Communication District	9	140	530	464	45%	26%	30%	Low	XLow
647	Lubbock Reese Redevelopment Authority	9	409	626	626	164%	65%	65%	MidLow	MidLow
639	Lumberton Municipal Utility District	33	3,240	2,288	2,288	49%	142%	142%	MidLow	MidLow
252	Lynn County	57	4,326	1,755	1,931	185%	246%	224%	Mid	MidHigh
497	Lynn County Appraisal District	2	445	0	0	100%	N/A	N/A	Zero	Zero
442	Lynn County Hospital District	168	9,105	7,601	7,601	160%	120%	120%	Mid	Mid
630	Macedonia - Eylau MUD - Bowie County	6	0	281	246	0%	0%	0%	Low	XLow
500	Mackenzie Municipal Water Authority - Briscoe County	6	469	147	147	0%	319%	319%	XLow	XLow
256	Madison County	106	4,891	4,185	4,185	140%	117%	117%	MidHigh	MidHigh
596	Madison County Appraisal District	5	0	346	346	0%	0%	0%	XLow	XLow
257	Marion County	81	2,476	2,001	2,001	135%	124%	124%	Mid	Mid
675	Marion County Appraisal District	6	102	0	0	N/A	N/A	N/A	Zero	Zero
931	Marion-Cass Soil and Water Conservation District	1	0	0	0	N/A	N/A	N/A	Zero	Zero
658	Marshall-Harrison County Health District	4	272	101	101	370%	268%	268%	XLow	XLow
258	Martin County	75	4,043	4,038	4,038	138%	100%	100%	MidHigh	MidHigh
595	Martin County Appraisal District	4	0	67	67	0%	0%	0%	XLow	XLow
259	Mason County	81	2,677	1,610	1,789	173%	166%	150%	MidLow	Mid
924	Mason County Soil & Water Conservation District #223	1	0	0	0	100%	N/A	N/A	Zero	Zero
260	Matagorda County	232	9,844	9,331	9,331	150%	105%	105%	Mid	Mid
987	Matagorda County Appraisal District	12	784	269	269	0%	291%	291%	XLow	XLow
678	Matagorda County Drainage District	7	0	241	241	0%	0%	0%	XLow	XLow
440	Matagorda County Hospital District	291	24,171	24,932	24,932	104%	97%	97%	High	High
677	Matagorda County Navigation District #1	3	0	0	0	N/A	N/A	N/A	Zero	Zero
261	Maverick County	375	19,465	15,416	16,856	188%	126%	115%	MidHigh	High
729	Maverick County Hospital District	87	4,543	3,835	3,835	116%	118%	118%	Low	Low
453	Maverick County WCID #1	41	1,832	1,168	1,168	157%	157%	157%	MidLow	MidLow
844	McCamey County Hospital District	122	9,962	5,043	5,674	244%	198%	176%	Low	MidLow
253	McCulloch County	45	4,173	2,024	2,024	66%	206%	206%	MidHigh	MidHigh
512	McCulloch County Appraisal District	4	0	175	175	384%	0%	0%	XLow	XLow
254	McLennan County	1,091	72,672	50,542	56,158	143%	144%	129%	MidLow	Mid
725	McLennan County 9-1-1 Emergency Assistance District	7	0	0	0	N/A	N/A	N/A	Zero	Zero
491	McLennan County Appraisal District	40	2,597	1,796	1,796	123%	145%	145%	Low	Low
679	McLennan County WCID #2	3	380	0	0	100%	N/A	N/A	Zero	Zero
1037	McMullen Central Appraisal District	3	0	0	0	N/A	N/A	N/A	Zero	Zero
255	McMullen County	59	2,377	2,031	2,031	161%	117%	117%	XLow	XLow
841	Medical Arts Hospital - Dawson County	110	24,934	6,661	7,494	271%	374%	333%	Low	MidLow
262	Medina County	257	17,613	11,627	11,627	108%	151%	151%	Mid	Mid
705	Medina County 911 District	3	0	0	0	N/A	N/A	N/A	Zero	Zero
535	Medina County Appraisal District	13	797	504	504	0%	158%	158%	Low	Low
419	Memorial Medical Center - Calhoun County	276	12,592	14,660	14,660	186%	86%	86%	MidHigh	MidHigh
263	Menard County	46	3,621	961	961	95%	377%	377%	Low	Low
1070	Menard County Hospital District	50	0	0	0	N/A	N/A	N/A	Low	Low
377	Menard County Underground Water District	3	0	0	0	N/A	N/A	N/A	Zero	Zero
743	Mesa Underground Water Conservation District	2	0	0	0	100%	N/A	N/A	Zero	Zero
669	Middle Rio Grande Development Council	90	2,182	1,434	1,614	245%	152%	135%	Low	MidLow
492	Midland Central Appraisal District	36	1,550	941	941	101%	165%	165%	XLow	XLow
264	Midland County	675	39,343	42,778	42,778	129%	92%	92%	MidHigh	MidHigh
570	Midland Emergency Communication District	5	0	350	350	48%	0%	0%	XLow	XLow
911	Milam Appraisal District	9	901	381	381	0%	236%	236%	XLow	XLow
265	Milam County	181	9,819	7,637	7,637	190%	129%	129%	Mid	Mid
617	Mills Central Appraisal District	3	0	110	110	216%	0%	0%	XLow	XLow
266	Mills County	50	2,150	2,002	2,002	163%	107%	107%	Mid	Mid
267	Mitchell County	74	5,095	2,550	2,550	106%	200%	200%	MidLow	MidLow
484	Mitchell County Appraisal District	4	365	0	0	N/A	N/A	N/A	Zero	Zero
919	Monahans Housing Authority	6	369	250	250	0%	148%	148%	XLow	XLow
268	Montague County	102	5,524	5,067	5,067	138%	109%	109%	Mid	Mid
504	Montague County Tax Appraisal District	6	0	32	32	513%	0%	0%	XLow	XLow
605	Montgomery Central Appraisal District	94	8,569	4,018	4,018	110%	213%	213%	Low	Low
269	Montgomery County	2,548	135,381	146,749	146,749	95%	92%	92%	MidLow	MidLow
667	Montgomery County Emergency Communication District	10	0	531	464	24%	0%	0%	Low	XLow
696	Montgomery County Emergency Service District No 3	58	1,674	2,298	2,298	258%	73%	73%	XLow	XLow
982	Montgomery County Emergency Services District #4	30	1,993	1,876	1,876	19%	106%	106%	Low	Low
800	Montgomery County Emergency Services District #8	122	3,246	7,994	6,995	55%	41%	46%	Low	XLow
999	Montgomery County Emergency Services District 7	63	3,334	1,797	1,797	N/A	186%	186%	Low	Low
989	Montgomery County Emergency Services District 9	63	1,487	1,872	1,872	0%	79%	79%	Low	Low
973	Montgomery County Emergency Services District No. 10	3	166	0	0	100%	N/A	N/A	Zero	Zero
651	Montgomery County ESD 1	97	2,728	3,720	3,720	N/A	73%	73%	Low	Low
763	Montgomery County Hospital District	382	37,026	28,393	31,658	171%	130%	117%	MidLow	Mid
804	Montgomery County Housing Authority	4	50	23	23	0%	215%	215%	XLow	XLow

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			Actual	Expected by Group		Prior Study	Current Study	Proposed Group	Current	Proposed
				Current	Proposed					
270	Moore County	138	7,642	6,792	6,792	155%	113%	113%	Low	Low
733	Moore County Appraisal District	6	1,820	0	0	100%	N/A	N/A	Zero	Zero
412	Moore County Hospital District	365	18,433	29,040	29,040	129%	63%	63%	High	High
271	Morris County	66	2,943	2,282	2,282	172%	129%	129%	Low	Low
1089	Morris County Appraisal District	6	0	0	0	N/A	N/A	N/A	XLow	XLow
738	Mustang Special Utility District	54	4,002	1,888	2,124	254%	212%	188%	Low	MidLow
273	Nacogdoches County	258	21,021	14,336	15,639	125%	147%	134%	MidHigh	High
515	Navarro Central Appraisal District	12	1,009	407	458	371%	248%	220%	Low	MidLow
274	Navarro County	307	13,230	12,822	12,822	152%	103%	103%	Low	Low
572	Newton Central Appraisal District	14	706	461	527	208%	153%	134%	XLow	Low
275	Newton County	118	5,853	3,199	3,519	190%	183%	166%	Mid	MidHigh
276	Nolan County	127	6,829	6,237	6,237	110%	109%	109%	MidHigh	MidHigh
962	Nortex Regional Planning Commission	29	778	493	493	58%	158%	158%	Low	Low
1030	North Blanco County Emergency Services District No. 1	21	106	120	120	N/A	88%	88%	XLow	XLow
556	North Central Texas Municipal Water Authority	10	143	369	369	0%	39%	39%	XLow	XLow
938	North East Texas Regional Mobility Authority	9	264	0	0	100%	N/A	N/A	Zero	Zero
852	North Hunt Special Utility District	7	0	350	350	49%	0%	0%	XLow	XLow
838	North Plains Groundwater Conservation District	14	1,293	602	602	41%	215%	215%	Low	Low
927	North Texas Emergency Communication Center	66	9,847	2,395	3,096	N/A	411%	318%	Low	MidLow
646	North Texas Tollway Authority	721	68,174	39,606	44,776	214%	172%	152%	Low	MidLow
1056	Northeast Gaines County Emergency Services District #1	11	0	0	0	N/A	N/A	N/A	Low	Low
562	Northeast Texas Municipal Water District	17	124	428	428	98%	29%	29%	XLow	XLow
632	Northeast Texas Public Health District	133	7,278	6,977	6,977	110%	104%	104%	Mid	Mid
368	Northern Trinity Groundwater Conservation District	3	0	0	0	N/A	N/A	N/A	Zero	Zero
277	Nueces County	1,276	97,734	65,304	71,834	132%	150%	136%	Mid	MidHigh
683	Nueces County Appraisal District	84	1,994	2,530	2,530	102%	79%	79%	Low	Low
400	Nueces County Drainage District #2	21	611	465	465	192%	132%	132%	Low	Low
791	Nueces County Emergency Services District #2	10	1,372	0	0	N/A	N/A	N/A	Zero	Zero
416	Nueces County WCID #3	27	757	812	812	47%	93%	93%	Low	Low
450	Nueces County WCID #4	19	394	1,011	1,011	69%	39%	39%	Low	Low
278	Ochiltree County	78	4,262	2,589	2,589	133%	165%	165%	MidLow	MidLow
1042	Ochiltree County Appraisal District	6	0	0	0	N/A	N/A	N/A	XLow	XLow
279	Oldham County	35	2,340	983	983	82%	238%	238%	Low	Low
517	Oldham County Appraisal District	3	56	0	0	100%	N/A	N/A	Zero	Zero
280	Orange County	422	20,674	14,148	14,148	117%	146%	146%	Low	Low
490	Orange County Appraisal District	18	424	977	977	168%	43%	43%	Low	Low
421	Orange County Drainage District	62	1,792	2,495	2,495	223%	72%	72%	Low	Low
665	Orange County Emergency Services District #1	7	1,323	305	305	614%	434%	434%	XLow	XLow
803	Orange County Emergency Services District #2	8	514	286	286	57%	179%	179%	XLow	XLow
660	Orange County Navigation and Port District	7	0	318	318	115%	0%	0%	XLow	XLow
631	Orange County WCID #1	28	1,560	1,209	1,209	122%	129%	129%	Low	Low
730	Palo Duro Water District	2	414	0	0	N/A	N/A	N/A	Zero	Zero
723	Palo Pinto Appraisal District	13	0	617	617	17%	0%	0%	Low	Low
281	Palo Pinto County	160	12,263	8,265	8,265	77%	148%	148%	Mid	Mid
282	Panola County	179	9,958	6,315	6,315	108%	158%	158%	Low	Low
283	Parker County	482	23,029	28,471	28,471	98%	81%	81%	MidHigh	MidHigh
717	Parker County Appraisal District	38	2,562	2,265	2,265	26%	113%	113%	Low	Low
922	Parker County Emergency Services District No. 1	38	1,097	1,331	1,331	11%	82%	82%	Low	Low
784	Parker County Hospital District	108	2,368	7,022	7,022	96%	34%	34%	Low	Low
754	Parker County Special Utility District	9	301	0	0	100%	N/A	N/A	Zero	Zero
284	Parmer County	64	4,080	2,531	2,531	51%	161%	161%	Mid	Mid
747	Parmer County Appraisal District	4	60	0	0	N/A	N/A	N/A	Zero	Zero
765	Pecan Valley Groundwater Conservation District	2	462	0	0	100%	N/A	N/A	Zero	Zero
285	Pecos County	423	41,173	30,935	30,935	113%	133%	133%	MidHigh	MidHigh
494	Pecos County Appraisal District	6	69	257	257	108%	27%	27%	Low	Low
774	Pecos County Water Control & Improvement District #1	6	0	0	0	N/A	N/A	N/A	Zero	Zero
796	Permian Basin Regional Planning Commission	21	3,183	1,029	1,029	123%	309%	309%	Low	Low
673	Permian Regional Medical Center	371	45,601	24,822	24,822	109%	184%	184%	Mid	Mid
707	Pineywoods Groundwater Conservation District	2	0	0	0	100%	N/A	N/A	Zero	Zero
697	Polk Central Appraisal District	18	375	964	844	4%	39%	44%	Low	XLow
286	Polk County	312	19,040	13,427	14,770	135%	142%	129%	Mid	MidHigh
739	Polk County Fresh Water Supply District #2	10	136	0	0	N/A	N/A	N/A	Zero	Zero
676	Port of Bay City Authority	2	0	0	0	N/A	N/A	N/A	Zero	Zero
449	Port of Beaumont Navigation District	44	3,476	1,714	1,714	57%	203%	203%	XLow	XLow
620	Port of Corpus Christi Authority	252	10,466	11,794	11,794	92%	89%	89%	Low	Low
622	Port of Port Arthur Navigation District	18	0	1,146	1,146	70%	0%	0%	Low	Low
726	Post Oak Savannah Groundwater Conservation District	5	80	0	0	100%	N/A	N/A	Zero	Zero
560	Potter - Randall County ECD	6	0	0	0	100%	N/A	N/A	Zero	Zero
287	Potter County	581	41,726	29,527	29,527	123%	141%	141%	MidLow	MidLow
840	Prairielands Groundwater Conservation District	7	1,127	0	0	100%	N/A	N/A	Zero	Zero
626	Presidio Appraisal District	5	51	167	167	0%	31%	31%	XLow	XLow
288	Presidio County	79	4,056	3,107	3,107	213%	131%	131%	MidLow	MidLow
289	Rains County	76	5,504	2,545	2,776	154%	216%	198%	MidHigh	High
537	Rains County Appraisal District	6	0	201	176	0%	0%	0%	Low	XLow
290	Randall County	542	34,441	31,674	31,674	105%	109%	109%	Mid	Mid
564	Randall County Appraisal District	37	1,012	1,572	1,572	127%	64%	64%	Low	Low
406	Rankin County Hospital District - Upton County	70	8,525	5,472	6,080	136%	156%	140%	MidLow	Mid
823	Rayburn Country Municipal Utility District	8	56	0	0	100%	N/A	N/A	Zero	Zero
291	Reagan County	114	7,345	4,683	5,268	217%	157%	139%	Low	MidLow
445	Reagan Hospital District	122	11,943	5,181	5,828	256%	231%	205%	Low	MidLow
292	Real County	39	2,461	978	978	63%	252%	252%	Mid	Mid
1007	Real County Appraisal District	5	0	0	0	N/A	N/A	N/A	Zero	Zero

Emp. No.	Employer Name	Contrib. Members	Weighted Terminations (in \$Thousands) ¹			Actual / Expected Ratio			Term Group	
			Actual	Expected by Group		Prior Study	Current Study	Proposed Group	Current	Proposed
				Current	Proposed					
505	Red Bluff Water Power Control District - Reeves County	4	53	98	85	626%	55%	63%	Low	XLow
845	Red River Appraisal District	6	0	173	173	478%	0%	0%	XLow	XLow
435	Red River Authority	31	2,063	1,716	1,716	167%	120%	120%	Mid	Mid
293	Red River County	94	3,838	2,955	2,955	148%	130%	130%	MidHigh	MidHigh
921	Red River County Soil and Water Conservation District	1	0	0	0	100%	N/A	N/A	Zero	Zero
294	Reeves County	581	79,738	31,020	31,020	160%	257%	257%	High	High
786	Reeves County Appraisal District	8	1,330	0	0	N/A	N/A	N/A	Zero	Zero
1087	Reeves County Emergency Service District No. 1	6	0	0	0	N/A	N/A	N/A	XLow	XLow
1088	Reeves County Emergency Service District No. 2	1	0	0	0	N/A	N/A	N/A	XLow	XLow
588	Reeves County Hospital District	292	22,152	14,099	15,665	142%	157%	141%	MidLow	Mid
295	Refugio County	119	9,623	4,638	5,153	189%	208%	187%	MidLow	Mid
543	Refugio County Drainage District #1	9	0	88	88	0%	0%	0%	XLow	XLow
801	Rio Grande Council of Governments	36	721	1,301	1,301	98%	55%	55%	Low	Low
970	Riverside Special Utility District	10	868	203	203	N/A	427%	427%	XLow	XLow
296	Roberts County	44	577	1,415	1,415	12%	41%	41%	Low	Low
297	Robertson County	129	6,154	5,035	5,035	116%	122%	122%	MidLow	MidLow
904	Robertson County Appraisal District	7	0	243	243	125%	0%	0%	XLow	XLow
370	Robertson County Emergency Services District	1	0	0	0	N/A	N/A	N/A	Zero	Zero
698	Rockwall Central Appraisal District	21	244	733	733	173%	33%	33%	Low	Low
298	Rockwall County	347	20,957	22,230	22,230	101%	94%	94%	MidHigh	MidHigh
299	Runnels County	78	2,002	1,791	1,791	181%	112%	112%	Low	Low
300	Rusk County	266	11,955	10,983	10,983	119%	109%	109%	Mid	Mid
612	Rusk County Appraisal District	11	84	0	196	N/A	N/A	43%	Zero	XLow
848	Rusk County Groundwater Conservation District	2	635	0	0	N/A	N/A	N/A	Zero	Zero
301	Sabine County	81	3,304	2,549	2,549	85%	130%	130%	MidHigh	MidHigh
863	Sabine County Appraisal District	5	0	0	0	100%	N/A	N/A	Zero	Zero
568	Sabine Pass Port Authority	8	1,130	204	204	99%	554%	554%	XLow	XLow
706	Sabine-Neches Navigation Dist of Jefferson County Texas	9	504	735	643	0%	69%	78%	Low	XLow
302	San Augustine County	69	5,284	2,996	2,996	83%	176%	176%	High	High
303	San Jacinto County	190	12,316	6,501	7,092	236%	189%	174%	MidHigh	High
553	San Jacinto County Central Appraisal District	14	1,397	699	699	144%	200%	200%	Low	Low
990	San Jacinto County Emergency Services District	1	0	0	0	N/A	N/A	N/A	Zero	Zero
1072	San Marcos Housing Authority	20	0	0	0	N/A	N/A	N/A	Low	Low
304	San Patricio County	492	33,048	23,485	23,485	120%	141%	141%	MidHigh	MidHigh
495	San Patricio County Appraisal District	20	4,500	857	857	99%	525%	525%	Low	Low
426	San Patricio County Drainage District	19	78	564	564	141%	14%	14%	Low	Low
750	San Patricio County Navigation District #1	3	353	0	0	N/A	N/A	N/A	Zero	Zero
422	San Patricio Municipal Water District	38	1,577	2,470	2,470	21%	64%	64%	XLow	XLow
305	San Saba County	51	1,300	1,282	1,282	166%	101%	101%	Mid	Mid
766	Santo Special Utility District	3	0	0	0	100%	N/A	N/A	Zero	Zero
306	Schleicher County	42	2,987	1,339	1,339	114%	223%	223%	Low	Low
307	Scurry County	181	9,794	8,750	8,750	133%	112%	112%	Mid	Mid
893	Scurry County Appraisal District	10	1,341	246	246	0%	545%	545%	XLow	XLow
760	Scurry County Hospital District	273	20,636	13,647	15,353	234%	151%	134%	Low	MidLow
983	Seis Lagos Utility District	6	0	0	0	N/A	N/A	N/A	XLow	XLow
308	Shackelford County	46	1,729	1,251	1,251	264%	138%	138%	Mid	Mid
470	Shackelford County Appraisal District	4	64	114	114	271%	56%	56%	XLow	XLow
309	Shelby County	111	11,904	5,306	5,788	145%	224%	206%	MidHigh	High
627	Shelby County Appraisal District	7	969	314	314	0%	308%	308%	Low	Low
310	Sherman County	45	1,734	1,265	1,406	169%	137%	123%	MidLow	Mid
469	Sherman County Appraisal District	4	236	80	80	126%	294%	294%	XLow	XLow
311	Smith County	882	52,518	51,107	51,107	124%	103%	103%	MidHigh	MidHigh
555	Smith County 9-1-1 Communications District	6	265	228	228	93%	116%	116%	XLow	XLow
606	Smith County Appraisal District	40	5,516	2,569	2,826	166%	215%	195%	Mid	MidHigh
385	Smith County Emergency Services District #2	108	363	550	550	N/A	66%	66%	Low	Low
312	Somervell County	233	3,625	5,345	5,345	182%	68%	68%	Low	Low
507	Somervell County Central Appraisal District	6	797	283	283	149%	281%	281%	XLow	XLow
699	Somervell County Water District	10	556	0	0	N/A	N/A	N/A	Zero	Zero
795	South Plains Association of Governments	34	1,474	1,161	1,161	255%	127%	127%	Low	Low
894	South Rains Special Utility District	7	85	0	0	100%	N/A	N/A	Zero	Zero
645	South Texas Development Council	29	625	967	967	179%	65%	65%	Low	Low
768	Southeast Texas Groundwater Conservation District	1	0	0	0	N/A	N/A	N/A	Zero	Zero
930	STAR Transit	99	2,139	1,529	1,529	N/A	140%	140%	Low	Low
313	Starr County	545	21,484	22,046	22,046	155%	97%	97%	High	High
536	Starr County Appraisal District	20	924	474	533	293%	195%	173%	Low	MidLow
314	Stephens County	53	3,653	1,676	1,862	147%	218%	196%	MidLow	Mid
869	Stephens County Tax Appraisal District	2	228	0	0	N/A	N/A	N/A	Zero	Zero
315	Sterling County	80	5,249	3,294	3,623	173%	159%	145%	Mid	MidHigh
837	Sterling County Appraisal District	2	0	0	0	N/A	N/A	N/A	Zero	Zero
316	Stonewall County	32	427	772	772	83%	55%	55%	MidLow	MidLow
724	Stonewall County Appraisal District	3	202	0	0	100%	N/A	N/A	Zero	Zero
458	Stonewall Memorial Hospital District	110	5,261	5,407	5,407	255%	97%	97%	Mid	Mid
539	Stratford Hospital District - Sherman County	61	5,205	2,426	2,669	296%	214%	195%	Mid	MidHigh
317	Sutton County	72	3,430	1,679	1,679	121%	204%	204%	XLow	XLow
573	Sutton County Hospital District	80	16,005	5,236	5,759	183%	306%	278%	Mid	MidHigh
318	Swisher County	62	1,725	1,643	1,643	281%	105%	105%	MidLow	MidLow
460	Swisher County Appraisal District	3	563	61	61	78%	922%	922%	XLow	XLow
356	Talty Special Utility District	9	115	313	313	N/A	37%	37%	XLow	XLow
607	Tarrant Appraisal District	194	5,079	10,216	10,216	83%	50%	50%	Low	Low
545	Tarrant Co 9-1-1 Emergency Assistance District	26	1,206	716	716	0%	168%	168%	XLow	XLow
319	Tarrant County	4,618	247,282	209,223	239,112	125%	118%	103%	XLow	Low
574	Tax Appraisal District of Cottle County	2	0	0	0	100%	N/A	N/A	Zero	Zero
320	Taylor County	646	33,733	29,926	29,926	115%	113%	113%	Mid	Mid

Emp. No.	Employer Name	Contrib. Members	Weighted Terminations (in \$Thousands) ¹			Actual / Expected Ratio			Term Group	
			Actual	Expected by Group		Prior Study	Current Study	Proposed Group	Current	Proposed
				Current	Proposed					
321	Terrell County	38	2,331	1,133	1,274	223%	206%	183%	Low	MidLow
753	Terrell County Water Control & Improvement District #1	3	58	0	0	N/A	N/A	N/A	Zero	Zero
322	Terry County	87	5,257	4,974	4,974	140%	106%	106%	Mid	Mid
402	Terry Memorial Hospital District	150	13,034	9,454	10,314	134%	138%	126%	MidHigh	High
437	Texas Association of Counties	177	22,151	12,605	14,005	156%	176%	158%	MidLow	Mid
354	Texas County & District Retirement System	136	7,591	11,010	11,010	72%	69%	69%	MidLow	MidLow
634	Texas Eastern 9-1-1 Network	3	0	0	0	100%	N/A	N/A	Zero	Zero
986	The City of Quanah Housing Authority	7	161	0	0	100%	N/A	N/A	Zero	Zero
772	The Housing Authority of the City of Abilene	22	1,705	1,046	1,177	274%	163%	145%	Low	MidLow
777	The Housing Authority of the City of Huntington	2	0	0	0	N/A	N/A	N/A	Zero	Zero
913	The Housing Authority of the City of Pharr Texas	28	392	810	810	236%	48%	48%	Low	Low
912	The Housing Authority of the County of Hidalgo Texas	33	1,913	767	767	89%	250%	250%	Low	Low
1081	Throckmorton Central Appraisal District	3	0	0	0	N/A	N/A	N/A	Zero	Zero
323	Throckmorton County	27	771	676	676	190%	114%	114%	MidLow	MidLow
324	Titus County	139	6,602	6,381	6,381	117%	103%	103%	MidHigh	MidHigh
742	Titus County Appraisal District	7	795	308	308	615%	258%	258%	XLow	XLow
501	Titus County Fresh Water Supply District	8	0	275	275	176%	0%	0%	XLow	XLow
325	Tom Green County	706	53,298	31,939	34,930	161%	167%	153%	MidHigh	High
601	Travis Central Appraisal District	109	14,142	6,342	7,135	251%	223%	198%	Low	MidLow
326	Travis County	5,253	342,232	298,401	298,401	124%	115%	115%	Low	Low
720	Travis County Emergency Services District #1	63	4,070	2,458	2,809	139%	166%	145%	XLow	Low
836	Travis County Emergency Services District #2	176	10,015	12,446	12,446	85%	80%	80%	Low	Low
371	Travis County Emergency Services District #5	25	573	623	623	N/A	92%	92%	Low	Low
957	Travis County Emergency Services District 12	41	3,159	1,607	1,808	250%	197%	175%	Low	MidLow
980	Travis County Emergency Services District No. 11	69	3,146	3,725	3,725	87%	84%	84%	Low	Low
650	Tri-County Special Utility District	6	283	205	205	20%	138%	138%	XLow	XLow
633	Trinity Bay Conservation District	43	1,193	2,142	2,142	75%	56%	56%	MidLow	MidLow
327	Trinity County	97	4,055	2,740	3,014	144%	148%	135%	Mid	MidHigh
857	Trinity County Appraisal District	14	163	431	431	119%	38%	38%	Low	Low
829	Trinity Glen Rose Groundwater Conservation District	3	0	0	0	N/A	N/A	N/A	Zero	Zero
790	Trophy Club Municipal Utility District No 1	20	981	771	771	221%	127%	127%	Low	Low
735	Two Way Special Utility District	7	669	0	0	100%	N/A	N/A	Zero	Zero
328	Tyler County	161	8,776	4,345	4,828	146%	202%	182%	MidLow	Mid
471	Tyler County Appraisal District	11	762	285	285	0%	267%	267%	Low	Low
561	United Irrigation District - Hidalgo County	30	1,186	1,381	1,381	120%	86%	86%	MidLow	MidLow
834	Upper Brushy Creek WCID	4	1,970	0	0	100%	N/A	N/A	Zero	Zero
830	Upper Leon River Municipal Water District	14	0	403	403	171%	0%	0%	Low	Low
387	Upper Sabine Valley Solid Waste Management District	7	417	157	157	N/A	266%	266%	XLow	XLow
792	Upper Trinity Groundwater Conservation District	11	351	0	215	N/A	N/A	163%	Zero	XLow
329	Upshur County	206	14,409	6,629	7,365	225%	217%	196%	MidLow	Mid
330	Upton County	96	9,122	4,242	4,242	88%	215%	215%	Low	Low
682	Upton County Appraisal District	4	0	0	0	100%	N/A	N/A	Zero	Zero
331	Uvalde County	253	12,463	11,672	11,672	132%	107%	107%	MidHigh	MidHigh
843	Uvalde County Appraisal District	14	0	0	0	N/A	N/A	N/A	Low	Low
332	Vai Verde County	278	13,632	11,370	11,370	141%	120%	120%	MidHigh	MidHigh
663	Valley Municipal Utility District #2 - Cameron County	13	603	527	527	22%	114%	114%	Low	Low
586	Valwood Improvement Authority - Dallas County	7	0	111	111	0%	0%	0%	XLow	XLow
333	Van Zandt County	189	15,205	8,500	8,500	166%	179%	179%	High	High
672	Van Zandt County Appraisal District	18	1,418	702	702	20%	202%	202%	Low	Low
420	Velasco Drainage District - Brazoria County	34	2,199	1,537	1,537	100%	143%	143%	XLow	XLow
334	Victoria County	594	37,965	27,131	30,266	146%	140%	125%	MidLow	Mid
423	Victoria County Drainage District #3	5	354	138	138	0%	256%	256%	XLow	XLow
767	Victoria County Groundwater Conservation District	7	0	0	0	100%	N/A	N/A	Zero	Zero
335	Walker County	395	22,206	19,944	19,944	127%	111%	111%	Mid	Mid
872	Walker County Appraisal District	19	1,182	844	844	79%	140%	140%	Low	Low
1085	Walker County Emergency Service District #2	1	0	0	0	N/A	N/A	N/A	Zero	Zero
748	Walker County Special Utility District	9	304	530	530	252%	57%	57%	XLow	XLow
336	Waller County	268	21,355	13,159	14,475	131%	162%	148%	Mid	MidHigh
773	Waller County Appraisal District	21	1,204	311	311	103%	387%	387%	Low	Low
337	Ward County	187	12,292	8,303	8,303	111%	148%	148%	Mid	Mid
565	Ward County Central Appraisal District	4	290	103	103	109%	281%	281%	XLow	XLow
444	Ward Memorial Hospital	89	16,093	8,420	9,186	259%	191%	175%	MidHigh	High
338	Washington County	235	19,889	12,182	13,400	144%	163%	148%	Mid	MidHigh
339	Webb County	1,653	84,402	76,940	76,940	117%	110%	110%	MidLow	MidLow
604	Webb County Appraisal District	58	3,177	4,002	4,002	73%	79%	79%	MidLow	MidLow
443	West Central Texas Council of Governments	102	9,280	6,136	6,136	119%	151%	151%	Mid	Mid
410	West Central Texas Municipal Water District	22	393	906	906	124%	43%	43%	MidLow	MidLow
454	West Jefferson County Municipal Water District	10	463	431	431	178%	107%	107%	XLow	XLow
688	West Nueces -Las Moras Soil & WC District #236	1	0	0	0	N/A	N/A	N/A	Zero	Zero
358	West Travis County Public Utility Agency	39	4,058	0	932	100%	N/A	435%	Zero	XLow
340	Wharton County	230	9,399	5,082	5,808	154%	185%	162%	XLow	Low
993	Wharton County Central Appraisal District	11	490	518	518	0%	95%	95%	Low	Low
621	Wharton County WCID #1	3	97	0	0	N/A	N/A	N/A	Zero	Zero
923	Wharton County WCID No. 2	4	0	0	0	100%	N/A	N/A	Zero	Zero
341	Wheeler County	84	2,574	2,802	2,802	174%	92%	92%	MidLow	MidLow
476	Wheeler County Appraisal District	3	0	93	93	0%	0%	0%	XLow	XLow
427	White River Municipal Water District - Dickens County	7	233	356	356	786%	65%	65%	XLow	XLow
740	Wichita Appraisal District	19	541	927	927	97%	58%	58%	Low	Low
342	Wichita County	485	38,303	27,898	27,898	125%	137%	137%	MidHigh	MidHigh
446	Wichita County Water Improvement District #2	12	673	405	405	0%	166%	166%	XLow	XLow
559	Wichita-Wilbarger 9-1-1 District	3	0	151	151	0%	0%	0%	XLow	XLow
655	Wickson Creek Special Utility District - Brazos County	13	84	558	558	50%	15%	15%	XLow	XLow
343	Wilbarger County	82	3,733	3,230	3,230	86%	116%	116%	MidLow	MidLow
715	Wilbarger County Appraisal District	3	192	0	0	100%	N/A	N/A	Zero	Zero
530	Wilbarger County Hospital District	200	18,427	12,115	13,216	256%	152%	139%	MidHigh	High

Emp. No.	Employer Name	Contrib. Members	Weighted Terminations (in \$Thousands) ¹				Actual / Expected Ratio			Term Group	
			Actual	Expected by Group		Prior Study	Current Study	Proposed Group	Current	Proposed	
				Current	Proposed						
344	Willacy County	123	13,496	5,029	5,588	213%	268%	242%	MidLow	Mid	
575	Willacy County Appraisal District	6	23	58	58	0%	40%	40%	XLow	XLow	
652	Willacy County Housing Authority	5	0	0	0	100%	N/A	N/A	Zero	Zero	
608	Williamson Central Appraisal District	70	2,543	4,139	4,139	93%	61%	61%	Low	Low	
345	Williamson County	1,868	169,500	115,091	127,879	142%	147%	133%	MidLow	Mid	
798	Williamson County Emergency Services District #3	41	2,310	0	654	N/A	N/A	353%	Zero	XLow	
897	Williamson County Emergency Services District #5	18	1,024	0	246	N/A	N/A	415%	Zero	XLow	
1044	Williamson County Emergency Services District #7	15	0	0	0	N/A	N/A	N/A	XLow	XLow	
361	Williamson County Emergency Services District No. 4	41	650	1,707	1,707	0%	38%	38%	Low	Low	
346	Wilson County	200	13,221	6,906	6,906	116%	191%	191%	MidLow	MidLow	
479	Wilson County Appraisal District	11	621	593	593	55%	105%	105%	Low	Low	
1023	Wilson County Emergency Services District #1	23	0	0	0	N/A	N/A	N/A	XLow	XLow	
1017	Wilson County Emergency Services District #3	32	0	0	0	N/A	N/A	N/A	Low	Low	
347	Winkler County	122	21,862	7,994	7,994	129%	273%	273%	MidHigh	MidHigh	
533	Winkler County Appraisal District	2	0	0	0	100%	N/A	N/A	Zero	Zero	
389	Winkler County Hospital District	97	4,614	2,568	2,568	N/A	180%	180%	MidLow	MidLow	
937	Wintergarden Groundwater Conservation District	2	0	0	0	100%	N/A	N/A	Zero	Zero	
348	Wise County	425	25,452	24,790	24,790	98%	103%	103%	MidHigh	MidHigh	
493	Wise County Appraisal District	16	935	812	812	125%	115%	115%	Low	Low	
349	Wood County	184	19,136	9,466	10,518	163%	202%	182%	MidLow	Mid	
700	Wood County Appraisal District	11	0	119	119	201%	0%	0%	Low	Low	
1084	Woodbine Special Utility District	10	0	0	0	N/A	N/A	N/A	XLow	XLow	
991	Wylie Northeast Special Utility District	9	67	436	436	0%	15%	15%	XLow	XLow	
350	Yoakum County	332	19,893	17,996	17,996	91%	111%	111%	Mid	Mid	
776	Yoakum County Appraisal District	3	62	0	0	N/A	N/A	N/A	Zero	Zero	
351	Young County	114	5,642	3,960	3,960	164%	142%	142%	MidLow	MidLow	
352	Zapata County	257	8,954	8,516	8,516	181%	105%	105%	MidLow	MidLow	
649	Zapata County Appraisal District	6	0	128	128	0%	0%	0%	XLow	XLow	
935	Zapata Soil and Water Conservation District	1	0	0	0	100%	N/A	N/A	Zero	Zero	
353	Zavala County	113	3,842	3,756	3,756	130%	102%	102%	Mid	Mid	
566	Zavala County Appraisal District	9	56	447	447	221%	12%	12%	Low	Low	

Appendix D Summary of Proposed Assumptions

This section of the report describes the actuarial procedures and assumptions proposed for the 2017 valuation. The actuarial assumptions used in the valuation are intended to estimate the future experience of the members and employers of TCDRS and of the system itself in areas that affect the projected benefit flow and anticipated investment earnings. Any variations in future experience from that projected by these assumptions will result in corresponding changes in the estimated costs of the TCDRS's benefits. Tables D-1 through D-7 summarize the actuarial assumptions.

We believe the proposed assumptions are reasonable as long-term average expectations and collectively represent reasonable expectations of experience over the long-term future.

Actuarial Cost Method

The actuarial valuation uses the entry age actuarial cost method. Under this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated as a level percentage of the individual's projected compensation between entry age and assumed exit. Entry age is determined as the member's current age less their total service, including pre-participation service with the employer and Proportionate Retirement Program service with another employer. The portion of this actuarial present value allocated to a valuation year is called the normal cost. The portion of this actuarial present value not provided for at a valuation date by the sum of (a) the actuarial value of the assets, and (b) the actuarial present value of future normal costs is called the unfunded actuarial accrued liability or UAAL. If the sum of (a) and (b) exceeds the actuarial present value of benefits then this difference is the overfunded actuarial accrued liability or OAAL.

Actuarial Value of Assets

The actuarial value of the SAF for each employer is equal to the fund value adjusted for a five-year recognition of the difference between the expected and actual interest credited to the SAF for each year with additional offsetting of the current gain or loss against prior years gains or losses as follows. First, to the extent that there is a loss for the year and there are unrecognized gains from previous years, or to the extent that there is a gain for the year and there are unrecognized losses from previous years, the gain or loss for the year shall be used to offset unrecognized gains or losses from previous years in the order of oldest to most recent. Any remaining gain or loss for the year is recognized over a five-year period. The actuarial value of the ESF is equal to the fund value. The Total Actuarial Value of Assets is equal to the sum of the actuarial values of the ESF and SAF.

Plan Funding

The UAAL attributable to each year is amortized over a closed 20-year period as a level percent of covered payroll. The UAAL attributable to benefit increases in a given year is amortized over a closed 15-year period as a level percent of covered payroll. If there is an overfunded actuarial accrued liability, the amortization period is an open 30-year period.

For newly participating districts that have five or fewer employees who are all within five years of retirement eligibility, any initial UAAL and any subsequent adoption of prior service credits are amortized over a five-year closed amortization period.

Extra contributions may be made by employers by choosing to pay an elected rate that is greater than the required funding rate or making ad hoc lump-sum contributions. If extra contributions over the required amount are made to a plan during the year, any extra contributions made as lump sums are first used to offset the UAAL increase, if any, related to plan changes elected during the current year. Any remaining extra contribution amounts are then used to pay down existing loss bases, in the order of oldest to most recent. After all existing

loss bases have been paid off, any remaining extra contributions are incorporated into the actuarial gains or losses for the current year.

Postretirement Benefit Increases

No future increases in retirement benefits are assumed for funding purposes.

Records and Data

The data used in the valuation consist of financial information; records of age, sex, service, salary, contribution rates and account balances of contributing members; and records of age, sex, and amount of benefit for retired members and beneficiaries. All of the data were supplied by the TCDRS and are accepted for valuation purposes without audit.

Edits for missing data were made as follows:

- Blank birth date – Member is assumed to be age 34 at entry to the system.
- Blank gender – Gender is assigned based on month of first deposit. If month of first deposit is in first half of year, member is assumed to be male, otherwise female. This approximates a 50% Male 50% Female assumption.

Additionally, for valuation purposes, active member ages are set to be no less than age 15 and no greater than age 80.

Replacement of Terminated Members

The ages at entry and distribution by sex of future members are assumed to average the same as those of the present members they replace. If the number of active members should increase, it is further assumed that the average entry age of the larger group will be the same, from an actuarial standpoint, as that of the present group. Under these assumptions, the normal cost rates for active members will not vary with the termination of present members.

Internal Revenue Code Section 415 Limit

The Internal Revenue Code Section 415 maximum benefit limitations are not reflected in the valuation for funding purposes. Any limitation is reflected in a member's benefit after retirement.

Internal Revenue Code Section 401(a)(17)

The Internal Revenue Code Section 401(a)(17) maximum compensation limitation is not reflected in the valuation for funding purposes. Any limitation is reflected in a member's benefit after retirement.

Option Elected at Retirement

Future retired members are assumed to elect the standard retirement option with a monthly benefit for the retiree's lifetime only. Current retirees and beneficiaries are valued based on the option previously selected.

Retirement Adjustment for Plans with the Partial-Lump Sum Payment Option. A 1.5% increase is applied to the ESF portion of the estimated monthly benefit for future retirees of employers who have elected the PLSO to account for the higher actuarial value of the lump sum.

Beneficiary Assumptions

For the active death benefit, it is assumed there is an eligible beneficiary who will elect an actuarially equivalent annuity benefit. Beneficiaries are assumed to be the opposite gender of the member. Female beneficiaries are assumed to be three years younger and male beneficiaries are assumed to be three years older.

Retirement Age for Inactive Members

Deferred vested inactive members are assumed to retire at the service retirement rates of active members after attaining eligibility to retire, but no earlier than age 60.

Deferred nonvested inactive members are assumed to receive a refund of their account balance in a single lump sum during the first 10 years after the valuation date. 10% of these members (as of the valuation date) are assumed to receive their account balance in each of the following 10 years. That is, the account balances of all deferred nonvested inactive members on the valuation date are expected to be distributed within 10 years of the valuation date.

Provision for Adverse Deviation

Small employers are subject to greater contribution rate volatility. To reduce the probability of increasing rates, a provision for adverse deviation is included for many small employers. Specifically, the payroll growth assumption has been set to 0% for many small employers. Additionally, no termination is assumed for very small employers.

Summary of Proposed Assumptions

I.	Economic assumptions	
A.	General wage increases	3.00%
B.	Aggregate investment return	7.50
C.	Growth in membership	0.00
D.	Payroll growth	3.00 or less
E.	Implied price inflation assumption	2.50
II.	Demographic assumptions	
A.	Merit salary increases	Table D-1
B.	Service retirement	Table D-2
C.	Disability	Table D-3
D.	Mortality among active members	Table D-4
	135% of Pub-2010 General Employees Amount-Weighted* for Males	
	120% of Pub-2010 General Employees Amount-Weighted* for Females	
E.	Mortality among inactive vested members, service retirees, disability retirees, and beneficiaries	Table D-5
	<u>Service Retirees</u>	
	135% of Pub-2010 General Retirees Amount-Weighted* for Males	
	120% of Pub-2010 General Retirees Amount-Weighted* for Females	
	<u>Beneficiaries</u>	
	Same as Service Retirees	
	<u>Disabled Retirees</u>	
	160% of Pub-2010 General Disabled Retirees Amount-Weighted* for Males	
	125% of Pub-2010 General Disabled Retirees Amount-Weighted * for Females	
G.	Other terminations of employment	Table D-6
H.	Retaining vested account upon termination of employment	Table D-7

* All Mortality tables use generational mortality with 100% of MP-2021 Ultimate Projection Scale

Table D-1
Merit Salary Increases

Years of Service	Entry Age			
	Before 30	Ages 30-39	Ages 40-49	50 & Later
0	5.25%	4.75%	4.25%	3.50%
1	4.50	4.00	3.50	2.75
2	4.10	3.25	2.85	2.20
3	3.70	3.00	2.50	1.75
4	3.35	2.75	2.25	1.65
5	3.10	2.60	2.15	1.55
6	2.85	2.40	2.05	1.40
7	2.65	2.25	1.90	1.25
8	2.50	2.15	1.80	1.15
9	2.35	2.00	1.65	1.05
10	2.20	1.85	1.50	0.95
11	2.10	1.75	1.35	0.85
12	1.95	1.65	1.25	0.80
13	1.85	1.55	1.10	0.75
14	1.75	1.45	1.00	0.70
15	1.65	1.35	0.90	0.65
16	1.50	1.25	0.85	0.60
17	1.40	1.15	0.75	0.55
18	1.30	1.05	0.70	0.50
19	1.25	1.00	0.65	0.45
20	1.20	0.95	0.60	0.40
21	1.15	0.90	0.55	0.40
22	1.10	0.85	0.50	0.40
23	1.00	0.75	0.45	0.40
24	0.94	0.65	0.40	0.40
25	0.88	0.60	0.40	0.40
26	0.82	0.60	0.40	0.40
27	0.76	0.60	0.40	0.40
28	0.70	0.60	0.40	0.40
29	0.65	0.60	0.40	0.40
30 & Up	0.60	0.60	0.40	0.40

**These rates do not include the wage inflation rate of 3.00% per year. For example, a member who entered the system at age 20 and is in his first year of service is assumed to receive a 8.41% total annual increase in his salary. The 8.41% is a combination of the 5.25% merit increase and the 3.00% wage inflation. Note that the two components are compounded, so it is a slightly different result than just adding the two percentages.*

Table D-2
Service Retirement

Age	Service			
	Less than 15 Years	Between 15 and 24 Years	Between 25 and 29 Years	Greater than 29 Years
40-49	5.250%	6.300%	7.700%	8.750%
50	5.625	6.750	8.250	9.375
51	5.625	6.750	8.250	9.375
52	6.000	7.200	8.800	10.000
53	6.000	7.200	8.800	10.000
54	6.750	8.100	9.900	11.250
55	6.750	8.100	9.900	11.250
56	6.750	8.100	9.900	11.250
57	7.500	9.000	11.000	12.500
58	7.500	9.000	11.000	12.500
59	7.500	9.000	11.000	12.500
60	9.000	10.800	13.200	15.000
61	9.000	10.800	13.200	15.000
62	13.500	16.200	19.800	22.500
63	11.250	13.500	16.500	18.750
64	11.250	13.500	16.500	18.750
65	22.500	22.500	27.500	27.500
66	22.500	22.500	27.500	27.500
67	21.600	21.600	26.400	26.400
68	18.900	18.900	23.100	23.100
69	18.900	18.900	23.100	23.100
70	20.700	20.700	25.300	25.300
71	20.700	20.700	25.300	25.300
72	20.700	20.700	25.300	25.300
73	20.700	20.700	25.300	25.300
74	20.700	20.700	25.300	25.300

For all eligible members ages 75 & later, retirement is assumed to occur immediately.

Note: Rates only apply to members eligible for service retirement.

**Table D-3
Disability**

Age	All Causes ¹
Less than 25	0.0000%
25	0.0030
26	0.0060
27	0.0090
28	0.0108
29	0.0126
30	0.0144
31	0.0162
32	0.0180
33	0.0204
34	0.0228
35	0.0252
36	0.0276
37	0.0300
38	0.0340
39	0.0380
40	0.0420
41	0.0460
42	0.0500
43	0.0580
44	0.0660
45	0.0740
46	0.0820
47	0.0900
48	0.0990
49	0.1080
50	0.1170
51	0.1260
52	0.1350
53	0.1440
54	0.1530
55	0.1620
56	0.1710
57	0.1800
58	0.1890
59	0.1980
60 & Above	0.0000

1 The probability of disability shown above is applicable for members who are vested but not eligible for service retirement. Before a member is vested, only the occupational disability probabilities are applicable. The annual rate of occupational disability is 0.001%.

**Table D-4
Active Death**

Age	Male	Female
25	0.0326%	0.0093%
26	0.0349	0.0103
27	0.0361	0.0114
28	0.0384	0.0124
29	0.0395	0.0134
30	0.0419	0.0155
31	0.0442	0.0165
32	0.0465	0.0186
33	0.0488	0.0196
34	0.0512	0.0217
35	0.0547	0.0238
36	0.0581	0.0258
37	0.0617	0.0289
38	0.0663	0.0310
39	0.0710	0.0341
40	0.0767	0.0372
41	0.0826	0.0413
42	0.0896	0.0444
43	0.0965	0.0486
44	0.1046	0.0527
45	0.1139	0.0579
46	0.1244	0.0630
47	0.1349	0.0682
48	0.1477	0.0734
49	0.1604	0.0796
50	0.1733	0.0858
51	0.1883	0.0930
52	0.2035	0.1002
53	0.2198	0.1085
54	0.2360	0.1168
55	0.2546	0.1271
56	0.2744	0.1374
57	0.2965	0.1488
58	0.3197	0.1612
59	0.3441	0.1757
60	0.3709	0.1922
61	0.3999	0.2098
62	0.4313	0.2294
63	0.4667	0.2524
64	0.5051	0.2789
65	0.5465	0.3072
66	0.5922	0.3402
67	0.6421	0.3770
68	0.6967	0.4170
69	0.7594	0.4619
70	0.8274	0.5115

Notes:

Rates are for members of the given age in 2021.

**Table D-5
Postemployment Death**

Age	Disabled Retirees ²		All Other Inactives ³		Age	Disabled Retirees ²		All Other Inactives ³	
	Male	Female	Male	Female		Male	Female	Male	Female
20	0.568%	0.251%	0.086%	0.036%	60	3.449%	2.105%	0.715%	0.397%
21	0.532	0.231	0.084	0.033	61	3.560	2.153	0.768	0.430
22	0.485	0.209	0.077	0.030	62	3.688	2.208	0.829	0.469
23	0.435	0.189	0.072	0.028	63	3.841	2.274	0.896	0.517
24	0.398	0.177	0.067	0.025	64	4.020	2.352	0.975	0.572
25	0.383	0.177	0.065	0.025	65	4.213	2.439	1.066	0.636
26	0.402	0.193	0.070	0.028	66	4.429	2.542	1.174	0.709
27	0.422	0.211	0.072	0.030	67	4.656	2.658	1.298	0.792
28	0.442	0.231	0.077	0.033	68	4.899	2.790	1.442	0.885
29	0.464	0.253	0.079	0.036	69	5.163	2.945	1.608	0.993
30	0.488	0.277	0.084	0.041	70	5.441	3.119	1.796	1.112
31	0.513	0.303	0.088	0.044	71	5.743	3.315	2.006	1.247
32	0.539	0.330	0.093	0.050	72	6.079	3.541	2.248	1.401
33	0.566	0.362	0.098	0.053	73	6.443	3.792	2.517	1.573
34	0.598	0.395	0.102	0.058	74	6.852	4.079	2.824	1.768
35	0.631	0.432	0.109	0.064	75	7.298	4.396	3.168	1.985
36	0.670	0.471	0.116	0.069	76	7.792	4.752	3.556	2.228
37	0.714	0.516	0.123	0.077	77	8.351	5.155	4.000	2.505
38	0.765	0.564	0.133	0.083	78	8.962	5.598	4.497	2.815
39	0.823	0.618	0.142	0.091	79	9.654	6.099	5.066	3.169
40	0.889	0.677	0.153	0.100	80	10.410	6.649	5.707	3.570
41	0.964	0.742	0.165	0.111	81	11.296	7.290	6.460	4.046
42	1.051	0.812	0.179	0.119	82	12.256	7.993	7.307	4.589
43	1.149	0.888	0.193	0.130	83	13.323	8.781	8.269	5.217
44	1.262	0.971	0.209	0.141	84	14.484	9.649	9.347	5.940
45	1.387	1.060	0.228	0.155	85	15.718	10.595	10.535	6.764
46	1.528	1.155	0.249	0.169	86	17.067	11.604	11.856	7.718
47	1.682	1.256	0.270	0.182	87	18.524	12.645	13.309	8.803
48	1.849	1.364	0.295	0.196	88	20.080	13.698	14.880	10.015
49	2.025	1.478	0.321	0.213	89	22.058	14.793	16.607	11.373
50	2.211	1.596	0.346	0.229	90	24.258	15.934	18.477	12.859
51	2.359	1.652	0.373	0.241	91	26.507	17.120	20.454	14.429
52	2.505	1.708	0.402	0.254	92	28.832	18.414	22.571	16.099
53	2.647	1.765	0.432	0.268	93	31.208	19.824	24.802	17.851
54	2.783	1.821	0.466	0.281	94	33.615	21.357	27.115	19.673
55	2.913	1.875	0.501	0.296	95	36.157	23.082	29.566	21.616
56	3.033	1.926	0.538	0.311	96	38.706	24.914	32.018	23.597
57	3.141	1.973	0.578	0.329	97	41.403	26.964	34.557	25.694
58	3.245	2.017	0.620	0.347	98	44.267	29.169	37.176	27.911
59	3.345	2.060	0.666	0.370	99	47.301	31.537	39.861	30.250

1 Male beneficiaries have the same inactive mortality assumptions as male retirees. Similarly, female beneficiaries have the same inactive mortality assumptions as female retirees. All rates are for members of the given age in 2021.

2 The disabled mortality rates are the Pub-2010 Disabled Retirees Tables for males and females, with a 160% adjustment for males and a 125% adjustment for females. Both are projected generationally using 100% of the MP-2021 Ultimate scale.

3 The inactive mortality rates are the Pub-2010 General Retirees Tables for males and females, with a 135% adjustment for males and a 120% adjustment for females. Both are projected generationally using 100% of the MP-2021 Ultimate scale.

Table D-6
Other Terminations of Employment ¹

Years of Service	Entry Age 20	Entry Age 30	Entry Age 40	Entry Age 50
0	33.0%	27.0%	24.0%	22.0%
1	25.0	21.0	18.0	16.0
2	21.0	18.0	14.0	13.0
3	18.0	15.0	12.0	11.0
4	15.0	13.0	10.0	9.0
5	13.0	11.0	9.0	8.0
6	11.0	10.0	8.0	7.0
7	10.0	9.0	7.0	6.0
8	9.0	8.0	6.0	5.5
9	8.0	7.0	5.5	5.0
10	7.0	6.5	5.1	0.0
11	6.5	6.0	4.8	0.0
12	6.0	5.5	4.5	0.0
13	5.5	5.0	4.2	0.0
14	5.0	4.7	3.8	0.0
15	4.4	4.4	3.4	0.0
16	4.0	4.0	3.0	0.0
17	3.6	3.6	2.6	0.0
18	3.3	3.3	2.2	0.0
19	3.0	3.0	1.8	0.0
20	2.7	2.7	0.0	0.0
21	2.5	2.5	0.0	0.0
22	2.3	2.3	0.0	0.0
23	2.1	2.1	0.0	0.0
24	1.9	1.9	0.0	0.0
25	1.7	1.7	0.0	0.0
26	1.5	1.5	0.0	0.0
27	1.3	1.3	0.0	0.0
28	1.1	1.1	0.0	0.0
29	1.0	1.0	0.0	0.0
30 & Later	0.0	0.0	0.0	0.0

¹ The above tables are adjusted based on termination group by multiplying by the following factors.

Zero	0%	Middle	100%
Extra-Low	70%	Mid-High	110%
Low	80%	High	120%
Mid-Low	90%		

Note: For plans that have adopted the partial lump-sum payment option, zero termination is assumed for individuals within two years of retirement eligibility. Additionally, there is a 0.0% probability of termination for all plans when a member is eligible for service retirement.

Table D-7
Refund of Contributions

Years of Service	5-Year Vesting	8-Year Vesting	10-Year Vesting
0	100.0%	100.0%	100.0%
1	100.0	100.0	100.0
2	100.0	100.0	100.0
3	100.0	100.0	100.0
4	100.0	100.0	100.0
5	40.0	100.0	100.0
6	38.0	100.0	100.0
7	36.0	100.0	100.0
8	34.0	34.0	100.0
9	33.0	33.0	100.0
10	32.0	32.0	32.0
11	31.0	31.0	31.0
12	30.0	30.0	30.0
13	29.0	29.0	29.0
14	27.0	27.0	27.0
15	26.0	26.0	26.0
16	25.0	25.0	25.0
17	24.0	24.0	24.0
18	23.0	23.0	23.0
19	22.0	22.0	22.0
20	21.0	21.0	21.0
21	20.0	20.0	20.0
22	19.0	19.0	19.0
23	18.5	18.5	18.5
24	18.0	18.0	18.0
25	17.5	17.5	17.5
26	17.0	17.0	17.0
27	16.5	16.5	16.5
28	16.0	16.0	16.0
29*	15.5	15.5	15.5

**Members with more than 29 years of service are not assumed to refund.*