

An Economic Assessment of the Cost of Cancer in Texas
and the Benefits of the
Cancer Prevention and Research Institute of Texas (CPRIT)
and its Programs:
2017 Update

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Introduction

The Cancer Prevention and Research Institute of Texas (CPRIT) has been working to reduce the tragically high human and financial cost of cancer since 2010. CPRIT has helped attract more than 100 leading cancer research scientists to Texas (including members of the prestigious National Academy of Sciences), funded research projects which have resulted in thousands of publications and more than 200 new patents and patent applications, generated more than 100 clinical trials, and provided grants for screening and related education which have provided almost four million prevention services and are improving access to lifesaving testing for some of the state's most vulnerable populations.

Reducing the burden of cancer provides benefits to individuals, families, hospitals, state and local governments, insurance providers, and society as a whole. Through research and prevention/screening, cancer incidence and severity can be notably reduced, providing relief in terms of health outcomes and quality of life, as well as the economy. Medical outlays can be decreased through earlier detection, and improving results benefit both patients and society as a whole through enhancing the productivity and lifespan of those affected by cancer. In addition, research activity, apart from its primary mission to drive fundamental breakthroughs, can serve as a catalyst for business development in related industries (such as biomedicine).

CPRIT is an Important Resource for Cancer Prevention, Screening, and Research

In addition to their positive effect on health and wellbeing, these activities generate sizable economic benefits. The Perryman Group (TPG) has quantified the cost of cancer in Texas and the economic benefits of CPRIT for several years. This report updates the findings from TPG's analysis utilizing the most recent data regarding cancer incidence and results to date from CPRIT grants, following the same general methodology and report structure to aid in comparisons of results across years.

- The **cost of cancer in Texas as traditionally measured is estimated to be \$38.7 billion in 2017 (about \$3.8 billion higher than in 2016), with total economic losses (including spinoff effects) of an estimated \$100.8 billion in output and over 1,045,800 jobs.**
- The current total annual impact of all CPRIT operations, prevention/screening and research programs (including initial outlays and multiplier effects) includes \$705.5 million in output (real gross product) in 2017 as well as 10,139 jobs. When all secondary benefits are considered, these values rise to \$10.9 billion in output and 98,430 jobs.
- This incremental business activity generates taxes for the State and local governments. For **Texas, annual tax receipts associated with CPRIT grants and programs (including downstream effects) total \$513.4 million in 2017; local public**

entities receive \$239.8 million. Over the ten-year life of the current commitment, these gross incremental taxes are expected to total just under \$4.5 billion for the State and almost \$2.1 billion for local governments. The net incremental taxes (which nets out the potential benefits of other typical uses of State funds) over the ten-year period) include just over \$4.1 billion to the State and almost \$1.9 billion to local governments. These amounts are well in excess of the total commitment of State resources.

- If funding for CPRIT is not renewed, the net cumulative economic losses over the initial 10 years of these initiatives not being continued include an estimated **\$107.3 billion in lost gross product and some 928,829 lost person-years of employment, as well as billions in foregone tax receipts to the State and local governments.**
- These results are explained more fully in subsequent sections and the Appendices to this report.

Summary of Economic Benefits Every Dollar Invested Through CPRIT Returns: (Including Initial Outlays and Secondary (Downstream) Effects)	
\$24.04	In Treatment Cost Savings and Resulting Economic Benefits through Earlier Detection from Prevention/Screening Activity in 2017
\$61.02	In Economic Activity (Total Expenditures) in 2017
\$34.33	In Output (Real Gross Product) in 2017
\$23.97	In Personal Income in 2017
\$8.13	In Retail Sales in 2017
\$2.06	In State Tax Receipts as of the 10 th Year of Operation (assuming stabilized levels of awards)
\$0.95	In Local Government Tax Receipts as of the 10 th Year of Operation (assuming stabilized levels of awards)
Source: The Perryman Group	

Report Components

An approach consistent to prior years was used where possible in this 2017 update. At present, the initial CPRIT grants have been in place for more than seven years. Recipients have reported progress, hiring, matching funds, and other key performance metrics. Firms have also located to Texas as a result of CPRIT efforts. This information was used in assessing the economic impacts related to research to the extent possible and, as in last year's update, were used to validate model results. The major components of The Perryman Group's analysis include the following:

The **economic cost of cancer** in terms of Texas business activity including losses stemming from treatment, morbidity, and mortality as well as the associated spillover effects are initially estimated. Data regarding the numbers of Texans with cancer and the associated costs for direct medical expenses, morbidity costs, and mortality are the subject of reports by entities such as the National Institutes of Health, the American Cancer Society, the National Cancer Institute (Centers for Disease Control (CDC)), and the Texas Cancer Registry (Texas Department of State Health Services). The projected costs of cancer treatment in 2020 and an estimated breakout of cancer expenditures by payer in 2016 are also given: both of these elements are newer features of the report which were included for the first time in the 2015 edition. A new addition to this year's report is an analysis of the losses associated with the top four cancer sites for annual deaths in Texas for 2017 which include lung and bronchus, colorectal, breast, and pancreas.

The **overall effect of CPRIT operations** on business activity in Texas (including multiplier effects) is estimated using input data regarding direct expenditures and operations employment at the Institute.

The **positive economic benefits of CPRIT-supported cancer prevention and screening programs** are also assessed, including both the increase in business activity due to the screenings themselves and the associated benefits from improved health. The effects of matching funds generated by CPRIT programs were also included. As of the 2015 report, this aspect of the analysis made use of extensive updates of prior underlying research on the rates of return to prevention and screening efforts, thus resulting in somewhat greater measured effects than in earlier years.

Economic returns on research supported by the Institute (including the effects related to the specific outlays, actual and anticipated recruitment efforts for high quality scholars in relevant areas, typical returns on medical research investments, and spinoff companies that surface from such endeavors) were also evaluated. Again, associated matching funds are also incorporated into the analysis.

Some illustrative scenarios related to **potential economic development and social gains** stemming from the Institute's role as a catalyst for incremental business activity are provided, as well as others demonstrating the economic value of increased quality of life, longevity, and productivity from improved outcomes.

The economic impact of not continuing CPRIT operations and initiatives beyond its original ten-year period is also evaluated. This projection reveals notable potential losses if CPRIT and its programs are not extended. When examined on a dynamic basis, CPRIT generates State revenues well in excess of its costs, thus providing a strong fiscal rationale for its continuation. The Appendices provide a detailed discussion of all aspects of the report, including methodology and disaggregated results.

The Economic Cost of Cancer in Texas

Cancer affects the longevity, quality of life, and finances of individuals suffering with the illness. Costs associated with cancer include direct medical outlays for treatment and care as well as indirect costs such as disease-related work disability or premature mortality. Prevention, early detection, effective treatment, and medical advances to minimize the consequences of the disease are vital national and, indeed, global priorities.

Millions of Americans are Dealing with Cancer

Despite advances in many aspects of cancer prevention and treatment, the number of Americans diagnosed with the disease remains very high. One factor in the recent upward trend in new cases is the aging of the US population, as cancer incidence increases among older age groups.

- The American Cancer Society estimates that there will be about 1,688,780 new cases of cancer (836,150 male and 852,630 female) and 600,920 deaths from cancer (318,420 male and 282,500 female) in the US in 2017. The number of new cases expected in 2017 is slightly higher than the number for 2016 due to an increase in cases for women as the male estimates are slightly lower than in 2016. The expected cancer deaths show a slight increase of 5,230 over 2016.¹
- In Texas, a total of 116,200 new cases of cancer are expected in 2017, with 40,260 cancer deaths projected.² Compared to the American Cancer Society estimates for 2016, about 490 fewer cases and about 810 more deaths are expected in 2017. The Texas Cancer Registry projects slightly higher numbers for Texas in 2017 than the American Cancer Society with 120,173 new cases (62,215 male and 57,957 female), as well as 44,523 deaths (24,256 male and 20,267 female).³ As with the nation, cancer remains the second leading cause of death in the state after cardiovascular disease.⁴

Cancer Costs are also Rising

Apart from the extremely high human cost, cancer causes economic harms to affected individuals, businesses, and society as a whole through shortened life spans, lost productivity, increased health care expenditures, and premature mortality.

- The **direct medical costs and morbidity and mortality losses (as traditionally measured) in the state totaled an estimated \$38.7 billion in 2017**, up notably from

¹ *Cancer facts & figures 2017*. (2017). American Cancer Society.

² *Cancer facts & figures 2017*. (2017). American Cancer Society.

³ Texas Cancer Registry, Cancer Epidemiology and Surveillance Branch, Texas Department of State Health Service, April 2017. Because of the additional detail provided in these estimates, they are used in much of the current analysis.

⁴ *Cancer facts & figures 2017*. (2017). American Cancer Society.

\$34.9 billion in 2016 and \$31.3 billion two years ago (according to TPG's update of existing information from the National Institutes of Health⁵ and a study of costs in Texas.⁶) In 2010, cancer treatment costs in Texas were \$11.5 billion in current dollars and just under \$13.0 billion in constant 2017 dollars. By 2020, treatment costs are expected to be \$18.9 billion in current dollars (a 64.6 % rise) and \$17.7 billion in constant 2017 dollars (a 36.3% increase). The projected rates of increase at the national level are even higher.

Cancer Treatment Costs Affect both the Private Sector and the Public Sector

Costs of cancer treatment are covered by private insurance companies, social programs such as Medicare and Medicaid, and by the patients themselves.

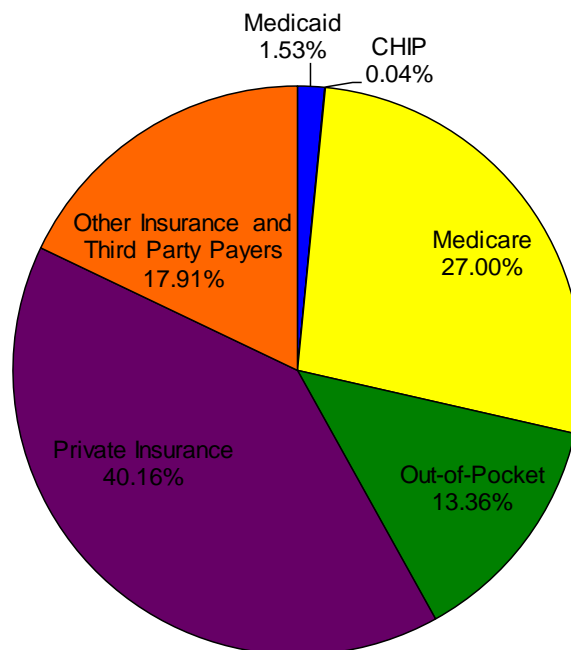
- The Perryman Group estimates that the cost of cancer treatment to private insurance companies in 2016 was just over \$5.9 billion.
- The cost of treating cancer in Texas paid through Medicaid in 2016 was almost \$226.0 million.
- The CHIP program spent some \$5.3 million treating cancer in 2016.
- Costs of cancer treatment to Medicare totaled an estimated \$4.0 billion.
- The cost of treating cancer to other third-party payers in 2016 was determined to be just over \$2.6 billion.
- The out-of-pocket cost to cancer patients in 2016 was approximately \$2.0 billion.⁷

⁵ The National Institutes of Health (NIH) estimated the total overall cost of cancer in 2010 (the latest year for which such information is available) to be \$263.8 billion including direct medical costs of \$102.8 billion (including the total of all health expenditures), indirect morbidity costs (the cost of lost productivity due to illness) of \$20.9 billion, and indirect mortality costs (the cost of lost productivity due to premature death) of \$140.1 billion. See Cancer facts & figures 2011. (2011). American Cancer Society.

⁶ A study directed by the Texas Department of State Health Services (DSHS) and conducted by scholars at the University of Texas Medical Branch (UTMB) found that the total cost of cancer in the state was roughly \$21.9 billion in 2007, with \$10.0 billion in direct medical costs and \$11.8 billion in indirect costs from lost productivity due to cancer morbidity and mortality. See Philips, B.U., et al. (2009, March). The cost of cancer in Texas 2007. Department of Preventive Medicine and Community Health; Texas Medical Branch at Galveston.

⁷ Medicaid and CHIP cancer expenditure data from AHQP Claims Universe, Texas Medicaid and Healthcare Partnership (TMHP); Enc_Best Picture Universe, TMHP; prepared by Data Quality and Dissemination, Center for Analytics and Decisions Support, Texas Health and Human Services Commission, October 2017. All other expenditures are approximations by The Perryman Group based on best available data.

Cancer Treatment Costs Allocation by Payer in Texas 2016



Source: Medicaid and CHIP cancer expenditure data from AHQP Claims Universe, Texas Medicaid and Healthcare Partnership (TMHP); Enc_Best Picture Universe, TMHP; prepared by Data Quality and Dissemination, Center for Analytics and Decisions Support, Texas Health and Human Services Commission, October 2017. All other expenditures are approximations by The Perryman Group based on best available data.

The Cost of Cancer Goes Well Beyond Initial Effects

Several studies have clearly portrayed the very large economic losses associated with cancer. While many of these are excellent analyses, they fail to capture numerous “multiplier” effects associated with the disease and, thus, represent only a portion of the overall toll on business activity (only the initial effect of the various categories of cost).

- Several years ago, The Perryman Group developed a more comprehensive measure of the cost of cancer which includes losses stemming from treatment, morbidity, and mortality as well as the associated foregone spillover effects.
- Most studies of cancer costs reflect only the initial effect of direct medical outlays for treatment and care and indirect costs such as disease-related work disability or premature mortality are not included. However, these losses, in turn, generate further reductions in business activity. This more comprehensive measure is quantified in the approach utilized by The Perryman Group.

Measuring Economic Impacts

Any economic stimulus, whether positive (such as direct spending, investments, or corporate activity) or negative (such as lost productivity due to disease) generates multiplier effects throughout the economy. In this instance, economic costs of cancer include not only the initial incidence of costs, but also the subsequent rounds of economic activity which are forgone. Economic benefits of cancer research and prevention/screening activities include, among others, increased research spending, commercialization of discoveries, enhanced screening programs, and higher productivity stemming from better health outcomes. (These channels of benefits are described within the report and the accompanying Appendices.) Once the direct stimulus was quantified, the associated multiplier effects were measured.

The Perryman Group's input-output assessment model (the US Multi-Regional Impact Assessment System, which is described in further detail in the Appendices to this report) was developed by The Perryman Group some 35 years ago and has been consistently maintained and updated since that time; it has been used in hundreds of analyses for clients ranging from major corporations to government agencies. The system uses a variety of data (from surveys, industry information, and other sources) to describe the various goods and services (known as resources or inputs) required to produce another good/service. This process allows for estimation of the total economic impact (including multiplier effects) of CPRIT programs and related activity. An associated fiscal model allows for estimation of tax receipts to state and local entities. The submodels used in the current analysis reflect the specific industrial composition and characteristics of the Texas economy and its various counties, metropolitan areas, regions, and legislative districts.

These total economic effects are quantified for key measures of business activity:

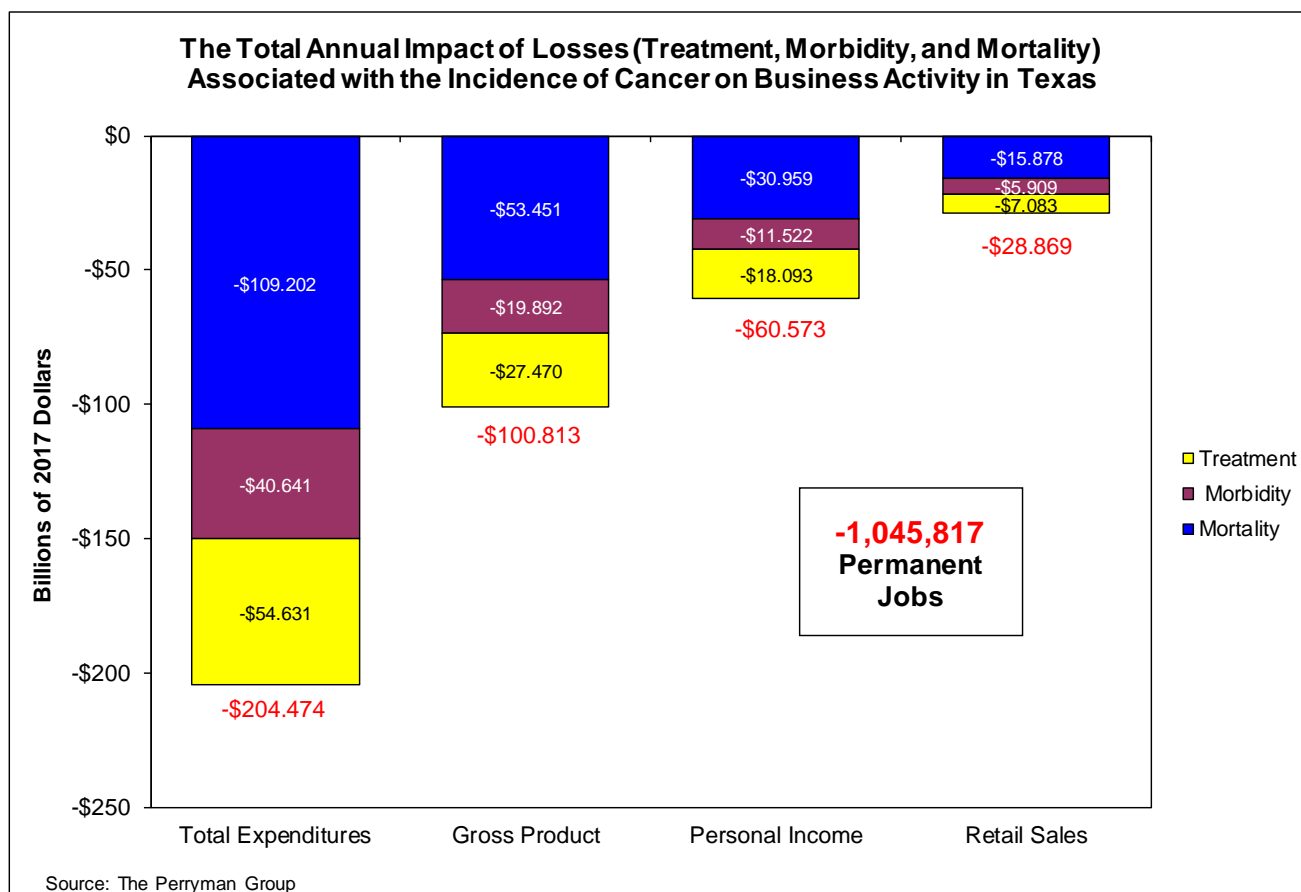
- **Total expenditures** (or total spending) measure the dollars changing hands as a result of the economic stimulus.
- **Gross product** (or output) is production of goods and services that will come about in each area as a result of the activity. This measure is parallel to the gross domestic product numbers commonly reported by various media outlets and is a subset of total expenditures.
- **Personal income** is dollars that end up in the hands of people in the area; the vast majority of this aggregate derives from the earnings of employees, but payments such as interest and rents are also included.
- **Job gains** are expressed as (1) person-years of employment (one person working for one year) for temporary projects (such as construction of a facility) or cumulative assessments over time or (2) permanent jobs when evaluating ongoing annual effects.

Dynamic State and local government revenues reflect tax receipts stemming from the increase in total economic activity. Monetary values were quantified on a constant (2017) basis, which eliminates inflationary effects and allows comparison across various time periods. See the Appendices to this report for additional information regarding the methods and assumptions used in this analysis.

Cancer Costs the Texas Economy \$204.5 Billion per Year

The Perryman Group's analysis indicates a total cost to the Texas economy of almost \$204.5 billion in reduced annual spending, \$100.8 billion in output losses per annum, and 1,045,800 lost jobs from cancer treatment, morbidity, and mortality and the associated spillover effects.

- These amounts represent an increase over last year's estimated total cost of \$169.9 billion in spending, \$83.8 billion in output, and 879,800 jobs. (These totals represent **approximately 5.5% of the total output of the Texas economy** and 8.2% of employment).
- **The yearly loss in State fiscal revenues** (including Medicaid and CHIP and uncompensated care) **is some \$8.1 billion**, while losses to **local governments include about \$3.4 billion per annum**.
- **Losses are spread across all regions of Texas, and are concentrated in the state's most populous areas.**



COST OF CANCER BY COUNCIL OF GOVERNMENTS REGION

ECONOMIC COST OF CANCER INCLUDING DIRECT MEDICAL EXPENSES AND PREMATURE MORBIDITY AND MORTALITY



ANNUAL EFFECT ON BUSINESS ACTIVITY		
	GROSS PRODUCT (Billions of 2017 Dollars)	EMPLOYMENT (Permanent Jobs)
Panhandle	(\$1.856)	(19,467)
South Plains	(\$1.722)	(18,920)
Nortex	(\$1.362)	(14,415)
North Central Texas	(\$24.763)	(250,386)
Ark-Tex	(\$1.480)	(17,188)
East Texas	(\$4.978)	(52,849)
West Central Texas	(\$1.925)	(20,480)
Rio Grande	(\$3.152)	(33,744)
Permian Basin	(\$1.756)	(17,657)
Concho Valley	(\$0.807)	(8,502)
Heart of Texas	(\$1.922)	(21,493)
Capital Area	(\$5.202)	(56,609)
Brazos Valley	(\$1.161)	(12,827)
Deep East Texas	(\$2.166)	(24,934)
South East Texas	(\$2.161)	(24,315)
Houston-Galveston Area	(\$23.867)	(225,364)
Golden Crescent	(\$1.002)	(10,693)
Alamo Area	(\$9.562)	(104,129)
South Texas	(\$0.728)	(7,985)
Coastal Bend	(\$2.816)	(29,191)
Lower Rio Grande Valley	(\$3.131)	(36,210)
Texoma	(\$1.105)	(12,713)
Central Texas	(\$1.616)	(19,064)
Middle Rio Grande	(\$0.573)	(6,682)
Border Region	(\$7.587)	(84,656)
TOTAL STATE	(\$100.813)	(1,045,817)
Note: Border Region includes Rio Grande, Terrell County, Middle Rio Grande, South Texas, and Lower Rio Grande Valley		
Source: The Perryman Group		

The Top Four Death Causing Cancers in Texas Cost the Texas Economy \$39.8 Billion per Year

As a new component of this year's analysis, The Perryman Group analyzed the losses associated with the top four cancer sites for annual deaths in Texas for 2017 which include lung and bronchus, colorectal, breast, and pancreas.

- The Perryman Group determined the total direct annual medical cost of these cancers in Texas is \$3.2 billion. The analysis also indicates a total cost to the Texas economy of just over \$39.8 billion in reduced annual spending, \$19.6 billion in reduced output per year, and 204,036 lost jobs from cancer treatment, morbidity, and mortality and the associated spillover effects.
- The following table illustrates total losses for each of these four cancers. Specifically, the analysis measures the total lifetime losses associated with the deaths in 2017 resulting from these four sites. Details of losses from treatment, morbidity, and mortality for each of these cancers can be found in the appendices.

The Total Impact of Losses (Treatment, Morbidity, and Mortality) from Lung and Bronchus, Colorectal, Breast, and Pancreatic Cancer Deaths in 2017 on Texas Business Activity

(Monetary Values in Billions of Constant 2017 Dollars)

ECONOMIC LOSSES

	Lung and Bronchus	Colorectal	Breast	Pancreatic	TOTAL
Total Expenditures	(\$20.7)	(\$8.7)	(\$4.6)	(\$5.8)	(\$39.8)
Gross Product	(\$10.2)	(\$4.3)	(\$2.3)	(\$2.8)	(\$19.6)
Personal Income	(\$6.1)	(\$2.6)	(\$1.4)	(\$1.7)	(\$11.8)
Retail Sales	(\$2.9)	(\$1.2)	(\$0.6)	(\$0.8)	(\$5.6)
Employment (Permanent Jobs)	(106,449)	(44,555)	(23,399)	(29,633)	(204,036)

Note: Medical costs based on (1) estimated costs per site for cancer cases over the diagnosis period as estimated by the National Institutes of Health (adjusted to reflect current dollars based on the Medical Services CPI for Texas areas as maintained by the US Bureau of Labor Statistics), (2) estimated deaths by cancer site in Texas for 2017 as compiled by the Texas Cancer Registry, and (3) estimated patterns following diagnosis based on patterns of incidence and death by site. Morbidity and mortality effects are estimated based on patterns relative to medical costs in Texas and approximate cost allocations over the disease cycle (which provides a reasonable proxy for morbidity and mortality patterns). Columns may not add to total due to rounding.

Source: The Perryman Group

Screening and Prevention Can Yield Substantial Savings

It is far less expensive to screen for cancer and treat it in its early stages.

- Detecting and treating cancer in earlier stages not only improves outcomes, but can also cost less compared to treating cancer in its latter stages.
- Not only are treatment expenses likely to be lower for early-stage diagnoses, but also morbidity and mortality losses are reduced.
- The Perryman Group's analysis indicates that **every \$1 spent through CPRIT for screening/prevention leads to \$24.04 in treatment cost savings and resulting economic benefits through earlier detection.**⁸
- The Perryman Group's analysis also estimates that **every \$1 spent on screening/prevention saves \$1.81 in direct health spending.** (These savings are included in the \$24.04 listed above.)

⁸ The reported benefits from screening and prevention are significantly higher than in earlier years based on recent and more comprehensive research which illustrates greater rates of return on prevention and screening than prior evidence. See, for example, Boland, Mairin and Joan Murphy, The Economic Argument for Prevention of Ill-health at Population Level, For Working Group on Public Health Policy Framework, May 2012.

The Economic Impact of CPRIT and its Programs

The overall effects of CPRIT and its various initiatives extend well beyond the initial stimulus and impacts business activity throughout the supply chain. Some of these benefits are quantified below.

CPRIT Investments Generate Economic Activity as Well as Progress toward New Discoveries

Even beyond the potentially life-changing influence of spending to reduce the incidence and severity of the disease, this **investment in research, screening, and related activities generates substantial economic impacts**. Moreover, the investment has the potential to reduce the cost of cancer through improving outcomes.

- Returns on investments in medical research include jobs created in the private sector, health care costs saved, the value of increased longevity, the value of reduced morbidity and disability, and the benefits of newer medicines and therapies.
- Job creation occurs not only directly through the scientists and staff in the research facilities, but also indirectly through the provision of business services needed by those institutions and other multiplier effects.
- Many studies over an extended period of time support the conclusion that investing in medical and cancer research can yield returns far in excess of initial outlays. Texas is already beginning to see tangible job gains and other benefits such as attracting top-tier research talent, external research funding, and commercialization of findings.

CPRIT Operations and Spending Were Linked to 10,139 Jobs in Texas in 2017

The direct outlays and related “multiplier” effects emanating from CPRIT operations and programs generated a sizable increase in business activity in Texas including \$705.5 million in output (gross product) and 10,139 jobs during fiscal year 2017.

- These economic benefits stem from operations, prevention and screening, and research programs. They are consistent with the results reported by grant recipients and other data available regarding CPRIT initiatives.
- Fiscal benefits are also significant, as noted in the table below.

The Current Impact of CPRIT Direct Operations, Prevention and Screening, and Research Programs on Texas Business Activity and Tax Receipts (Monetary Values in Millions of Constant 2017 Dollars)				
ECONOMIC BENEFITS				
	Operations	Prevention & Screening	Research	TOTAL
Total Expenditures	\$28.8	\$108.7	\$1,216.5	\$1,354.0
Gross Product	\$14.6	\$59.2	\$631.6	\$705.5
Personal Income	\$10.0	\$41.4	\$437.6	\$489.0
Retail Sales	\$3.8	\$15.5	\$166.4	\$185.7
Employment (Permanent Jobs)	133	752	9,254	10,139
FISCAL BENEFITS				
State (Texas)	\$0.7	\$2.9	\$32.3	\$35.9
Local Governmental Entities Throughout the State	\$0.3	\$1.6	\$19.3	\$21.3
Note: Columns may not add to total due to rounding. Source: The Perryman Group				

Secondary Benefits Enhance the Positive Effect of the Institute

Even beyond these substantial gains in business activity, CPRIT programs lead to secondary (downstream) benefits such as improved outcomes stemming from screening and prevention and research.

- Screening can help reduce cancer incidence and severity. TPG estimated the total annual net outcomes-related benefits from screening and prevention supported by CPRIT to be \$335.8 million in output (gross product) and 3,484 jobs in 2017 (on a net present value basis assuming typical outcomes from available academic studies⁹). Effects over 10 years are included in the Appendices to this report.
- The economic benefits of CPRIT-funded research activity compound over time. Current estimates of these secondary effects stemming from research include \$9.9 billion in output and 84,807 jobs in 2017. These gains are expected to continue to

⁹ As noted above, these estimates are notably higher than in prior years as a result of more specific recent research. See, for example, Boland, Mairin and Joan Murphy, The Economic Argument for Prevention of Ill-health at Population Level, For Working Group on Public Health Policy Framework, May 2012.

grow substantially in future years as programs continue and benefits cumulate (as indicated in the Appendices).

The Overall Total Current Impact of CPRIT Operations (including Secondary Effects) Includes a Gain of Some 98,430 Jobs in Texas

Adding the economic benefits of CPRIT operations, prevention/screening programs, research, outcomes-based prevention/screening, and secondary research effects yields a total gross impact of the Institute's operations of over \$19.5 billion in annual spending.

- The current total annual impact of all operations, prevention/screening, and research programs (including initial outlays and downstream effects) associated with CPRIT on Texas business activity was found to be \$10.9 billion in output and 98,430 jobs. Fiscal benefits are also substantial, as noted in the table below.
- Because of the cumulative nature of research gains, these benefits increase over time. Even when other potential uses for State funding of CPRIT are considered, the net economic benefits remain substantial (as indicated in the Appendices). Over an extended time horizon, CPRIT and the research funding it provides will likely generate fiscal receipts totaling a substantial multiple of the commitment of public resources (in addition to the notable economic and health benefits).

The Overall Total Gross Annual Impact of CPRIT Operations, Prevention/Screening, and Research Programs on Texas Business Activity and Tax Receipts (Including Direct Outlays with Multiplier Effects as Well as Secondary Effects) (Monetary Values in Millions of Constant 2017 Dollars)	
ECONOMIC BENEFITS*	
Total Expenditures	\$19,473.7
Gross Product	\$10,900.7
Personal Income	\$7,608.0
Retail Sales	\$2,599.3
Employment (Permanent Jobs)	98,430
FISCAL BENEFITS	
State (Texas)	\$513.4
Local Governmental Entities Throughout the State	\$239.8
*Based on budgeted operations and reported awards in fiscal year 2017. Source: The Perryman Group	

CPRIT's Benefits Extend Beyond these Economic Effects

The ultimate goal of CPRIT is reducing cancer incidence and the associated high human and economic costs, and a major reduction in incidence/severity would yield substantial economic benefits. In addition, the research activity supported by CPRIT can serve as a catalyst for economic development.

- If CPRIT's screening/prevention programs, research advances, and other initiatives reduce the incidence of cancer over time to equal the average of current levels observed in the five states with the lowest incidence and death rates, notable economic benefits would be realized. The Perryman Group estimates that **the gains in Texas stemming from a substantial reduction in cancer incidence by 2045 would include \$16.2 billion in gross product and about 168,440 permanent jobs.¹⁰ Fiscal benefits of such a reduction in cancer incidence include an estimated \$912.4 million to the State each year and \$418.5 million to local government entities (in constant 2017 dollars).** Moreover, these benefits do not include the obvious gains in quality of

¹⁰ Note that the time horizon has been increased from 2040 to 2045 this year to assure an ongoing assessment on a long-term basis. This change is consistent with the most recent long-term simulations of the Texas Econometric Model.

life and would not be restricted to Texas; they would bring better outcomes throughout the country and, indeed, the entire world.

- Through November 2017, CPRIT had funded 1191 awards for cancer research, product development, and prevention since 2010 with the awards totaling \$1,886,823,912.¹¹ CPRIT has enjoyed a number of successes and its programs and grants are helping attract key researchers and companies to Texas. CPRIT's investments have played a critical role in connecting universities, researchers, private companies, hospitals, clinics, and physicians across the Texas in the battle against cancer. CPRIT has recruited 135 cancer researchers and their labs to Texas. CPRIT's efforts have resulted in 108 new clinical trials with almost 9,800 patients. CPRIT has delivered over 1.85 million education and training services and over 2.03 million clinical services to Texans from every county in the state. CPRIT has awarded 32 grants for product development totaling just under \$330 million. With matching funds, the total investment for research and development is more than \$494 million as well as \$1.37 billion in follow-on funding. In addition to helping save lives, these grants have the potential to generate significant returns to CPRIT as well. Recipients of CPRIT grants have also published over 2,000 findings and received or applied for over 200 of patents.¹²
- The Institute's role as a potential catalyst for development of Texas' biomedical industries can help establish the Lone Star State as a center for such development. The economic gains from such economic development would be significant. The Perryman Group estimates that **if Texas achieves a concentration in the biomedical industry (pharmaceuticals and medical equipment) by 2045 equivalent to that of the US, incremental gains would include \$19.5 billion in annual gross product and 173,415 jobs. If the state's concentration in the biomedical industry in 2045 reached a level equivalent to California, the incremental economic benefits would include \$27.0 billion in gross product each year and about 235,800 jobs.**

Economic Effects of Not Extending CPRIT and Its Programs an Additional Ten Years

As has been illustrated, CPRIT plays a vital role in fighting cancer and generates substantial economic benefits to the state. The impact of not continuing CPRIT's programs with sustainable levels of funding for another 10 years beyond its initial mission would be significant.

- The Perryman Group estimates the anticipated gross cumulative ten-year losses of not extending CPRIT and all of its programs include almost **\$114.3 billion in lost gross product and some 1,030,221 lost person-years of employment.** The **gross fiscal losses** over ten years of not extending CPRIT and its programs include almost **\$5.4 billion to the State and \$2.5 billion to local governments.** Note that these losses do

¹¹ Grant Counter, Cancer Prevention & Research Institute of Texas website, December 4, 2017.

¹² Achievements Report, August 2017, Cancer Prevention & Research Institute of Texas.

not include any offset for the residual effects of the initial decade of activity, as those will be enjoyed irrespective of whether the program is renewed.

- Even when other potential uses for State funding of CPRIT are considered, the net cumulative economic losses over the additional 10 years not being funded remain substantial. These net losses include **\$107.3 billion in lost gross product and some 928,829 lost person-years of employment**. The net fiscal losses are noted in the table.
- Given the magnitude of the losses from not extending CPRIT and its programs it is clear that **CPRIT more than pays for itself and it is sound policy to extend CPRIT funding beyond the initial ten years**. It should be noted that, while commercialization of discoveries is clearly a viable and important aspect of the overall initiative and can at times generate near-term returns, support of basic research brings greater long-term gains and should continue to be the major focus of CPRIT efforts. Attempts to substantially alter the priorities of the program would diminish its value in terms of human health, economic impact, and fiscal benefits.

The Anticipated Net Cumulative Ten-Year Losses from Not Extending CPRIT and All of Its Programs at Sustainable Levels of Funding for Another Ten Years on Texas Business Activity and Tax Receipts (Including Direct Outlays with Multiplier Effects as Well as Secondary Effects) (Monetary Values in Billions of Constant 2017 Dollars)	
ECONOMIC LOSSES*	
Total Expenditures	(\$190.6)
Gross Product	(\$107.3)
Personal Income	(\$74.9)
Retail Sales	(\$25.4)
Employment (Person Years)	(928,829)
FISCAL LOSSES	
State (Texas)	(\$5.0)
Local Governmental Entities Throughout the State	(\$2.3)
<p>*Assumes CPRIT and its programs are not extended beyond the initial authorization. Losses are based on a comparison to the situation where CPRIT and all of its programs are continued for an additional ten years beyond the original authorization. All funding levels are sustained at the stabilized levels currently anticipated for the final year of the current program. Measured impacts do not include the residual benefits of the initial ten-year commitment, since those gains will accrue irrespective of whether or not the extension occurs. Source: The Perryman Group</p>	

Conclusion

The Cancer Prevention and Research Institute of Texas Plays a Crucial Role in the War on Cancer

- Through its operations, screening/prevention efforts, and research programs, CPRIT is helping reduce the extremely high human and economic costs of cancer.
- CPRIT is also generating sizable economic stimulus from its efforts including some \$10.9 billion in output (gross product) and 98,430 jobs in 2017 (when multiplier and secondary effects are included).
- Moreover, the Institute's efforts to improve outcomes related to cancer prevention and treatment can lead to a significant reduction in cancer incidence and severity over time and be a catalyst to biomedical development in Texas.

The Institute's Positive Impact Represents an Excellent Return on Fiscal Resources

- Research enabled by grants funded through CPRIT is already bearing fruit, with leading researchers as well as companies coming to the state, matching funds being attracted, and findings being published in leading journals. Empirical evidence shows that medical research and prevention programs can reduce cancer incidence and enhance outcomes.
- Reductions in treatment expenses, morbidity, and mortality stand to bring notable economic benefits.
- The economic activity stemming from CPRIT operations and programs generates **tax receipts and reduced State expenditures for health care over time which exceed the investment of resources**. The significance of CPRIT activities continues to expand and will only accelerate in the future, particularly if its mission is extended beyond the original authorization period.

An Economic Assessment of the Cost of Cancer in Texas
and the Benefits of the
Cancer Prevention and Research Institute of Texas (CPRIT)
and its Programs:

2017 Update

APPENDICES

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Appendix A: About The Perryman Group

The Perryman Group (TPG) is an economic research and analysis firm based in Waco, Texas. The firm has more than 35 years of experience in assessing the economic impact of corporate expansions, regulatory changes, real estate developments, public policy initiatives, and myriad other factors affecting business activity. TPG has conducted hundreds of impact analyses for local areas, regions, and states throughout the United States. Impact studies have been performed for hundreds of clients including many of the largest corporations in the world, governmental entities at all levels (including 10 cabinet departments), educational institutions, major health care systems, utilities, and economic development organizations.

Dr. M. Ray Perryman, founder and President of the firm, developed the US Multi-Regional Impact Assessment System (USMRIAS—used in this study) in the early 1980s and has consistently maintained, expanded, and updated it since that time. The model has been used in hundreds of diverse applications, has been peer reviewed on numerous occasions, and has an excellent reputation for reliability.

TPG has extensively analyzed the health care sector, including insurance, cost, affordability, and other areas relevant to the current analysis. The firm has analyzed the cost of cancer and the economic benefits of CPRIT for each of the past six years, as well as completing numerous other studies related to the cost of cancer and other diseases including diabetes, mental health disorders, and obesity. From a public policy perspective, studies have been performed related to Medicaid and State Children's Health Insurance Program (SCHIP) coverage, wellness initiatives, obesity treatment, health care access, and funding for mental health and substance abuse. One recent study was published in the *Journal of Medical Economics*. The firm has also recently examined the health effects of both child maltreatment and hunger.

Moreover, the proprietary models developed and maintained by the firm have been used in the analysis of scores of major medical facilities. Representative examples include the Methodist Hospital, Parkland, University Health System, Menninger Clinic, Scott & White, M. D. Anderson Cancer Center (including an assessment of its contribution to improved outcomes and the resulting benefits), and the University of Kansas Cancer Center (including an investigation of the benefits of achieving the status of a Comprehensive Cancer Center). Similarly, they have been employed to evaluate educational institutions and specific instructional and research programs for the University of Texas (including, among others, the Dell Medical School in Austin), Texas A&M University, University of Texas Medical Branch, Baylor University, University of Texas Health Science Center at San Antonio, the Texas A&M University Health Science Center, and Baylor College of Medicine). Recent work related to long-term access to health care has resulted in Dr. M. Ray Perryman, founder and president of the firm, being named as an Honorary Fellow of the National Academy of Nursing (the only non-medical professional to ever be so honored), while an analysis of the economics of Medicaid expansion under the Affordable Care Act helped frame the debate over participation. His work on health related aspects of issues such as indigent health care, mental health, jail diversion and drug treatment, hunger, and child maltreatment resulted in Dr. Perryman receiving the Cesar E. Chavez Legacy Award for his humanitarian efforts.

Appendix B: Methods Used

The Texas Econometric Model

The Texas Econometric Model was used in deriving baseline projections for economic activity and various costs, as well as in defining the growth parameters of the economic development scenarios. This Model is formulated in an internally consistent manner and is designed to permit the integration of relevant global, national, state, and local factors into the projection process. They are the result of nearly 40 years of continuing research in econometrics, economic theory, statistical methods, and key policy issues and behavioral patterns, as well as intensive, ongoing study of all aspects of the global, US, and Texas economies.

The remainder of this Technical Explanation describes the forecasting process in a comprehensive manner, focusing on both the modeling and the supplemental analysis. The overall methodology, while certainly not ensuring perfect foresight, permits an enormous body of relevant information to impact the economic outlook in a systematic manner.

Model Logic and Structure

The expanded version of the Texas Econometric Model, developed and maintained by The Perryman Group, revolves around a core system which projects output, income, and employment by industry in a simultaneous manner. For purposes of illustration, it is useful to initially consider the employment functions. Essentially, employment within the system is a derived demand relationship obtained from a neo-Classical production function. The expressions are augmented to include dynamic temporal adjustments to changes in relative factor input costs, output and (implicitly) productivity, and technological progress over time. Thus, the typical equation includes output, the relative real cost of labor and capital, dynamic lag structures, and a technological adjustment parameter. The functional form is logarithmic, thus preserving the theoretical consistency with the neo-Classical formulation.

The income segment of the model is divided into wage and non-wage components. The wage equations, like their employment counterparts, are individually estimated at the three-digit North American Industry Classification System (NAICS) level of aggregation. Hence, income by place of work is measured for approximately 70 distinct production categories. The wage equations measure real compensation, with the form of the variable structure differing between “basic” and “non-basic.”

The basic industries, comprised primarily of the various components of Mining, Agriculture, and Manufacturing, are export-oriented, i.e., they bring external dollars into the area and form the core of the economy. The production of these sectors typically flows into national and international markets; hence, the labor markets are influenced by conditions in areas beyond the borders of the particular region. Thus, real (inflation-adjusted) wages in the basic industry are expressed as a function of the corresponding national rates, as well as measures of local labor market conditions (the reciprocal of the unemployment rate), dynamic adjustment parameters, and ongoing trends.

The “non-basic” sectors are somewhat different in nature, as the strength of their labor markets is linked to the health of the local export sectors. Consequently, wages in these industries are related to those in the basic segment of the economy. The relationship also includes the local labor market measures contained in the basic wage equations.

Note that compensation rates in the export or basic sectors provide a key element of the interaction of the regional economies with national and international market phenomena, while the “non-basic” or local industries are strongly impacted by area production levels. Given the wage and employment equations, multiplicative identities in each industry provide expressions for total compensation; these totals may then be aggregated to determine aggregate wage and salary income. Simple linkage equations are then estimated for the calculation of personal income by place of work.

The non-labor aspects of personal income are modeled at the regional level using straightforward empirical expressions relating to national performance, dynamic responses, and evolving temporal patterns. In some instances (such as dividends, rents, and others) national variables (for example, interest rates) directly enter the forecasting system. These factors have numerous other implicit linkages into the system resulting from their simultaneous interaction with other phenomena in national and international markets which are explicitly included in various expressions.

The output or gross area product expressions are also developed at the three-digit NAICS level. Regional output for basic industries is linked to national performance in the relevant industries, local and national production in key related sectors, relative area and national labor costs in the industry, dynamic adjustment parameters, and ongoing changes in industrial interrelationships (driven by technological changes in production processes).

Output in the non-basic sectors is modeled as a function of basic production levels, output in related local support industries (if applicable), dynamic temporal adjustments, and ongoing patterns. The interindustry linkages are obtained from the input-output (impact assessment) system which is part of the overall integrated modeling structure maintained by The Perryman Group. Note that the dominant component of the econometric system involves the simultaneous estimation and projection of output, income, and employment at a disaggregated industrial level.

Several other components of the model are critical to the multi-regional forecasting process. The demographic module includes (1) a linkage equation between wage and salary (establishment) employment and household employment, (2) a labor force participation rate function, and (3) a complete age-cohort-survival population system with endogenous migration. Given household employment, labor force participation (which is a function

of economic conditions and evolving patterns of worker preferences), and the working age population (from the age-cohort-survival model), the unemployment rate and level become identities.

The population system uses Census information, fertility rates, and life tables to determine the “natural” changes in population by age group. Migration, the most difficult segment of population dynamics to track, is estimated in relation to relative regional and extra-regional economic conditions over time. Because evolving economic conditions determine migration in the system, population changes are allowed to interact simultaneously with overall economic conditions.

Retail sales is related to income, interest rates, dynamic adjustments, and patterns in consumer behavior on a store group basis. Inflation at the state level relates to national patterns, indicators of relative economic conditions, and ongoing trends.

A final significant segment of the forecasting system relates to real estate absorption and activity. The short-term demand for various types of property is determined by underlying economic and demographic factors, with short-term adjustments to reflect the current status of the pertinent building cycle. In some instances, this portion of the forecast requires integration with the Multi-Regional Industry-Occupation System which is maintained by The Perryman Group.

The overall Texas Econometric Model contains numerous additional specifications, and individual expressions are modified to reflect alternative lag structures, empirical properties of the estimates, simulation requirements, and similar phenomena. Nonetheless, the above synopsis offers a basic understanding of the overall structure and underlying logic of the system.

Model Simulation and Multi-Regional Structure

The initial phase of the simulation process is the execution of a standard non-linear algorithm for the state system and that of each of the individual sub-areas. The external assumptions are derived from scenarios developed through national and international models and extensive analysis by The Perryman Group.

Once the initial simulations are completed, they are merged into a single system with additive constraints and interregional flows. Using information on minimum regional requirements, import needs, export potential, and locations, it becomes possible to balance the various forecasts into a mathematically consistent set of results. This process is, in effect, a disciplining exercise with regard to the individual regional (including metropolitan and rural) systems. By compelling equilibrium across all regions and sectors, the algorithm ensures that the patterns in state activity are reasonable in light of smaller area dynamics and, conversely, that the regional outlooks are within plausible performance levels for the state as a whole.

The iterative simulation process has the additional property of imposing a global convergence criterion across the entire multi-regional system, with balance being achieved simultaneously on both a sectoral and a geographic

basis. This approach is particularly critical on non-linear dynamic systems, as independent simulations of individual systems often yield unstable, non-convergent outcomes.

It should be noted that the underlying data for the modeling and simulation process are frequently updated and revised by the various public and private entities compiling them. Whenever those modifications to the database occur, they bring corresponding changes to the structural parameter estimates of the various systems and the solutions to the simulation and forecasting system. The multi-regional version of the Texas Econometric Model is automatically re-estimated and simulated with each such data release, thus providing a constantly evolving and current assessment of state and local business activity.

The Final Forecast

The process described above is followed to produce the preliminary forecast. Through the comprehensive multi-regional modeling and simulation process, a systematic analysis is generated which accounts for both historical patterns in economic performance and inter-relationships and best available information on the future course of pertinent external factors. While the best available techniques and data are employed in this effort, they are not capable of directly capturing “street sense,” i.e., the contemporaneous and often non-quantifiable information that can materially affect economic outcomes. In order to provide a comprehensive approach to the prediction of business conditions, it is necessary to compile and assimilate extensive material regarding “what’s happenin’” both across the state of Texas and elsewhere.

This critical aspect of the forecasting methodology includes activities such as (1) daily review of key financial and business publications and electronic information sites; (2) review of major newspapers in the state on a daily basis; (3) dozens of hours of direct telephone interviews with key business and political leaders in all parts of the state; (4) face-to-face discussions with representatives of major industry groups; and (5) frequent site visits to the various regions of the state. The insights arising from this “fact finding” are analyzed and evaluated for their effects on the likely course of the future activity.

Another vital information resource stems from the firm’s ongoing interaction with key players in the international, domestic, and state economic scenes. Such activities include visiting with corporate groups on a regular basis and being regularly involved in the policy process at all levels. The firm is also an active participant in many major corporate relocations, economic development initiatives, and regulatory proceedings.

Once organized, this information is carefully assessed and, when appropriate, independently verified. The impact on specific communities and sectors that is distinct from what is captured by the econometric system is then factored into the forecast analysis. For example, the opening or closing of a major facility, particularly in a relatively small area, can cause a sudden change in business performance that will not be accounted for by either a modeling system based on historical relationships or expected (primarily national and international) factors.

The final step in the forecasting process is the integration of this material into the results in a logical and mathematically consistent manner. In some instances, this task is accomplished through “constant adjustment factors” which augment relevant equations. In other cases, anticipated changes in industrial structure or regulatory parameters are initially simulated within the context of the US Multi-Regional Impact Assessment System to estimate their ultimate effects by sector. Those findings are then factored into the simulation as constant adjustments on a distributed temporal basis. Once this scenario is formulated, the extended system is again balanced across regions and sectors through an iterative simulation algorithm analogous to that described in the preceding section.

The US Multi-Regional Impact Assessment System and Input Assumptions

The US Multi-Regional Impact Assessment System (USMRIAS) was developed by The Perryman Group some 35 years ago and has been consistently maintained and updated since that time. This model has been used in hundreds of diverse applications across the country and has an excellent reputation for accuracy and credibility. The systems used in the current simulations reflect the unique industrial structures and characteristics of the Texas economy and the counties, metropolitan areas, legislative districts, and regions within the state.

The basic USMRIAS modeling technique is known as dynamic input-output analysis. This methodology essentially uses extensive survey data, industry information, and a variety of corroborative source materials to create a matrix describing the various goods and services (known as resources or inputs) required to produce one unit (a dollar's worth) of output for a given sector. Once the base information is compiled, it can be mathematically simulated to generate evaluations of the magnitude of successive rounds of activity involved in the overall production process. The first phase of the analysis involves determining the magnitude of the direct effects. The data sources and assumptions used in determining direct effects are described below.

Cost of Cancer

The **cost of cancer** includes direct medical outlays for treatment and care and indirect costs such as disease-related work disability or premature mortality. Most studies of cancer costs reflect only the initial effect of the various categories of cost. However, these losses, in turn, generate further reductions in business activity. This more comprehensive measure was the approach utilized by The Perryman Group. An important source of input data is the Texas Cancer Registry, which includes information regarding treatment costs and income losses attributable to morbidity and mortality. Though this is an excellent source of the necessary input data, it is characterized by a significant time lag. In order to assess the full economic effects as of 2017, TPG updated these estimates using a projection model based on population growth and composition, overall inflation, and health care costs. Patterns in mortality and morbidity were also updated using recent data from the American Cancer Society. This segment of the analysis indicates that the annual direct medical costs and morbidity and mortality losses associated with cancer within the state are now estimated to total more than \$38.7 billion, up from \$34.9 billion last year and \$31.3 billion two years ago. The current estimate of \$38.7 billion is an increase of 76.7% above the estimate of \$21.9 billion in 2007, the base year of the original Texas cancer cost study conducted by researchers from the University of Texas Medical Branch (UTMB). The Perryman Group also estimated the projected treatment cost of cancer in 2020 and how much it is expected to increase from 2010. Additionally, a breakout of the expenditures on cancer in 2016 by payer is provided. The cancer expenditures by Medicaid and CHIP were provided by Data Quality and Dissemination, Center for Analytics and Decision Support, Texas Health and Human Services based on data from AHQP Claims Universe, Texas Medicaid and Healthcare Partnership. All other cancer expenditures (private insurance, Medicare, other third-party payers, and out-of-pocket to patients) are approximations by The Perryman Group based on the best available data. A new addition to this year's report

is an analysis of the losses associated with the top four cancer sites for annual deaths in Texas for 2017 which include lung and bronchus, colorectal, breast, and pancreas. Specifically, this segment of the analysis measures the long-term consequences to the economy of the deaths from these four sites experienced in 2017. For this analysis, medical costs were based on (1) estimated costs per site for cancer cases over the diagnosis period as estimated by the National Institutes of Health (adjusted to reflect current dollars based on the Medical Services CPI for Texas areas as maintained by the US Bureau of Labor Statistics), (2) estimated deaths by cancer site in Texas for 2017 as compiled by the Texas Cancer Registry, and (3) estimated patterns following diagnosis based on patterns of incidence and death by site. Morbidity and mortality effects are estimated based on patterns relative to medical costs in Texas and approximate cost allocations over the disease cycle (which provides a reasonable proxy for morbidity and mortality patterns).

Because the treatment cost component represents a loss to various payers, there is a “multiplier” effect if these funds could be redeployed into business activity. To estimate the direct inputs for this segment of the analysis, the actual outlays are allocated based on the current incidence of health care spending across more than 500 industrial and consumer categories utilizing the direct requirements matrix from the USMRIAS.

The **mortality and morbidity** estimates TPG used include productivity assumptions reflecting historical patterns and future projections from the baseline forecast of the Texas Econometric Model. Average compensation (rather than per-capita) was used to better capture any disparity between state and national earning patterns. Because the values were computed in terms of lost income, they do not reflect the full extent of the losses to the economy. Foregone income necessarily means that production, spending, employment, and other measures of economic activity are also foregone. These aggregates were measured using relevant coefficients to capture the relationships among the pertinent variables, as well as data from the Regional Economic Information System of the US Department of Commerce. Because the original approach captures these overall income effects, there are no additional “multiplier” calculations applied to this segment of the analysis, with the exception of the induced spending derived from the higher earnings. The direct values in this category were assumed to follow standard consumer purchasing patterns for Texas as identified by ACCRA and the US Department of Labor.

An important element of this segment of the analysis was allocating cancer costs to various geographic areas. The regional allocations of various categories of direct effects were accomplished based on health spending, cancer incidence, and cancer mortality rates at the county level. The relevant information was obtained from the US Department of Commerce and the National Cancer Institute. The county-level submodels of the USMRIAS reflect the unique industrial composition and characteristics of each county and multi-county area analyzed. They also capture spillover effects across regions.

CPRIT Program Benefits

In determining the **benefits of CPRIT** programs, The Perryman Group utilized input information regarding employment and expenditure levels at the Institute.

In the case of the **cancer-related health costs saved through screening programs**, The Perryman Group utilized available studies of the returns on investment in cancer prevention and screening (including leveraged funds from other sources). These studies also formed the basis for estimates of the potential improvement in outcomes. TPG then used standard measures of productivity and worklife to obtain the likely incremental economic activity associated with reducing the incidence/severity of cancer through early detection. Because returns on direct spending for prevention and screening programs were estimated based on available studies of such returns, they are unlikely to be specific to Texas or the exact programs offered by the Institute and will be subject to some range of error. (The impacts in this year's report are significantly higher than in earlier years due to recent and more specific research showing higher rates of return from screening and prevention than in the past.) Results to date were incorporated to the extent possible in estimating these economic benefits.

Returns on investments in medical research include jobs created in the private sector, health care costs saved, the value of increased longevity, the value of reduced morbidity and disability, and the benefits of newer medicines and therapies. Job creation occurs not only directly through the scientists and staff in the research facilities, but also indirectly through the provision of business services needed by those institutions and other multiplier effects. Additionally, revenues from licensing and royalty streams are economic gains generated by research and development facilities. Attracting matching funds further enhances these economic benefits. Although reporting on job creation is incomplete, the actual results to date are generally consistent with the estimates derived from the models.

TPG calculated the magnitude of these **secondary effects** based on typical annual rates of return to health-related research, the addition of new researchers each year, and standard patterns in spinoff companies from research outlays (fully adjusted for attrition). Spinoff firms from these investments were estimated using information from the Association of University Technology Managers (AUTM) which was fully adjusted for attrition, as well as data from the US Department of Commerce regarding typical firm size (excluding large pharmaceutical manufacturers). This information was fully updated for the current analysis. Available program data to date is highly consistent with these estimates.

The Perryman Group also estimated the outcomes-based economic benefits of CPRIT's programs (such as reduced morbidity and mortality). An important aspect of CPRIT's spending on prevention and screening programs is the reduced incidence and severity of cancer cases through earlier detection, and many studies have demonstrated the secondary or downstream benefits of such programs in terms of reduced health care costs, morbidity, and mortality.

For the **secondary impact of CPRIT research**, The Perryman Group measured the positive economic effects of research activities beyond the initial stimulus. Research leads to better cancer outcomes (and, thus, lower costs), spinoff activity, and the attraction of top researchers (and associated grant inflows). Many studies over an extended period of time support the conclusion that investing in medical and cancer research can yield returns far in excess of initial outlays. The Perryman Group utilized studies of the relationship between research and reduced treatment costs (as well as reduced morbidity and mortality) to estimate the positive economic outcomes in these areas stemming from the Institute's research support.

In addition, the economic benefits of new cancer-related therapeutics, diagnostics, and devices are estimated based on available empirical analyses of typical rates of return. Direct investments from other sources, including annual rates of federal R&D expenditures, are also quantified. Estimates of spinoff firms were derived through information sources such as studies by AUTM and others regarding typical firm formation rates until sufficient time elapses to have actual information. Based on the results available to date, these estimates are highly consistent with actual outcomes. As noted, a number of CPRIT grants have resulted in published papers and notable findings which are likely to lead to significant returns over time; specific results were incorporated to the extent possible. However, anticipated returns are of necessity partially estimated based on typical responses observed in other contexts because it is still relatively early in the life of CPRIT and its programs and there is a substantial lag between the creation of new ideas and their translation into health (and, hence, market) benefits. In fact, many of the benefits of CPRIT activities will continue to occur decades into the future. Over time, the results of more specific initiatives will become known and increasingly specific measures can be developed (and have been over the past few years). For example, the current estimates reflect the recruitment of scholars to date and leveraged funds associated with CPRIT grants. Because research benefits are ongoing and continue to provide benefits beyond the initial year of the outlays, they rise substantially over time due to the compounding effects of the grants and related matching funds.

Potential Economic Development and Societal Gains

Illustrations of potential economic development and societal gains are derived from analysis of the likely range of potential outcomes. They are forward-looking in nature, and more appropriately measured over a relatively extended time horizon. Inputs are based on reputable academic studies; nonetheless, they are subject to a range of error and changing conditions can affect actual results. Although the models used in this process have been maintained for more than 35 years and are widely used and accepted, all economic models are based on estimates and do not give perfect results.

An important role of CPRIT activity is as a **catalyst for economic development**. Investments in cancer research can be crucial to attracting top researchers and startup companies, which can later go on to grow into larger firms within the state. Even beyond the sizable economic benefits of the Institute's operations, screening, prevention, and research activity, the program has the potential to help establish Texas at the forefront of cancer research and related industries. The economic growth accruing from such a situation would be substantial. TPG measured the benefits that would occur if CPRIT, in conjunction with other ongoing initiatives, serves as a catalyst for greater economic development in the biomedical and pharmaceutical arena.

The Perryman Group developed scenarios to illustrate the potential economic development effects of Institute activities and measure gains in business activity above baseline projections. Scenarios involve the economic stimulus associated with a shift in Texas' relative position in industries related to the Institute (such as the biomedical industry cluster). The scenarios chosen are based on indications of the catalytic effect of the Institute (such as new company locations and related industrial development).

As this process occurs, supplier networks, training programs, related companies, and other resources tend to congregate, thus resulting in the establishment of a cluster of economic activity. Given the state's efforts to attract biomedical industries, CPRIT activity could serve as an impetus for a major concentration of emerging biomedical production sectors and, in fact, the results over time suggest that this phenomenon has already occurred.

The Perryman Group developed two scenarios to illustrate the potential economic development effects of CPRIT initiatives. Only incremental gains above baseline projections (as derived from the Texas Econometric Model) are included.

- Scenario I assumes Texas achieves a concentration in the biomedical industry (pharmaceuticals and medical equipment) by 2045 equivalent to that of the US.
- Scenario II presumes Texas achieves a concentration in the biomedical industry (pharmaceuticals and medical equipment) by 2045 equivalent to that of California. While there are certainly states with a higher relative presence in these sectors, California is representative of a large state that has strategically used its academic research capabilities to foster industrial development. The CPRIT initiative offers Texas an opportunity to leverage research into an enhanced presence in associated industries such as biomedicine and pharmaceuticals in a similar manner.

In addition, the research funded through CPRIT could help **reduce cancer incidence and severity**, thereby shrinking the enormous cost of the disease. The Perryman Group developed a scenario to illustrate the potential economic benefit of reducing cancer incidence in Texas which measures a shift in Texas' cancer incidence and death rates over time to the levels observed in other states. TPG quantified the gains that would occur in Texas and the US if research breakthroughs that were facilitated by CPRIT funding were able to reduce cancer incidence and death rates in the state and nation over time to a level equal to the current rate of the five states with the lowest prevalence.

The Perryman Group also determined the anticipated economic losses from not extending CPRIT's operations and programs an additional ten years beyond the original mission. The losses were estimated on both a gross and net basis and compared to the situation where CPRIT's programs are continued for a cumulative ten-year extension period with sustainable funding at the stabilized levels currently anticipated for the final year of the current program. The measured impacts do not include the residual benefits of the initial ten-year commitment as those gains will accrue irrespective of whether or not the extension occurs.

Once these direct gains were quantified, they were utilized as inputs into The Perryman Group's impact assessment system, the USMRIAS. The USMRIAS is somewhat similar in format to the Input-Output Model of the United States and the Regional Input-Output Modeling System, both of which are maintained by the US Department of Commerce. The model developed by TPG, however, incorporates several important enhancements and refinements. Specifically, the expanded system includes (1) comprehensive 500-sector coverage for any county, multi-county, or urban region; (2) calculation of both total expenditures and value-added by industry and region; (3) direct estimation of expenditures for multiple basic input choices (expenditures, output, income, or employment); (4) extensive parameter localization; (5) price adjustments for real and nominal assessments by sectors and areas; (6) measurement of the induced impacts associated with payrolls and

consumer spending; (7) embedded modules to estimate multi-sectoral direct spending effects; (8) estimation of retail spending activity by consumers; and (9) comprehensive linkage and integration capabilities with a wide variety of econometric, real estate, occupational, and fiscal impact models.

The impact assessment (input-output) process essentially estimates the amounts of all types of goods and services required to produce one unit (a dollar's worth) of a specific type of output. For purposes of illustrating the nature of the system, it is useful to think of inputs and outputs in dollar (rather than physical) terms. As an example, the construction of a new building will require specific dollar amounts of lumber, glass, concrete, hand tools, architectural services, interior design services, paint, plumbing, and numerous other elements. Each of these suppliers must, in turn, purchase additional dollar amounts of inputs. This process continues through multiple rounds of production, thus generating subsequent increments to business activity. The initial process of building the facility is known as the *direct effect*. The ensuing transactions in the output chain constitute the *indirect effect*.

Another pattern that arises in response to any direct economic activity comes from the payroll dollars received by employees at each stage of the production cycle. As workers are compensated, they use some of their income for taxes, savings, and purchases from external markets. A substantial portion, however, is spent locally on food, clothing, health care services, utilities, housing, recreation, and other items. Typical purchasing patterns in the relevant areas are obtained from the *ACCRA Cost of Living Index*, a privately compiled inter-regional measure which has been widely used for several decades, and the *Consumer Expenditure Survey* of the US Department of Labor. These initial outlays by area residents generate further secondary activity as local providers acquire inputs to meet this consumer demand. These consumer spending impacts are known as the *induced effect*. The USMRIAS is designed to provide realistic, yet conservative, estimates of these phenomena.

Sources for information used in this process include the Bureau of the Census, the Bureau of Labor Statistics, the Regional Economic Information System of the US Department of Commerce, and other public and private sources. The pricing data are compiled from the US Department of Labor and the US Department of Commerce. The verification and testing procedures make use of extensive public and private sources.

The USMRIAS generates estimates of the effect on several measures of business activity. The most comprehensive measure of economic activity used in this study is **Total Expenditures**. This measure incorporates every dollar that changes hands in any transaction. For example, suppose a farmer sells wheat to a miller for \$0.50; the miller then sells flour to a baker for \$0.75; the baker, in turn, sells bread to a customer for \$1.25. The Total Expenditures recorded in this instance would be \$2.50, that is, $\$0.50 + \$0.75 + \$1.25$. This measure is quite broad, but is useful in that (1) it reflects the overall interplay of all industries in the economy, and (2) some key fiscal variables such as sales taxes are linked to aggregate spending.

A second measure of business activity frequently employed in this analysis is that of **Gross Product**. This indicator represents the regional equivalent of Gross Domestic Product, the most commonly reported statistic regarding national economic performance. In other words, the Gross Product of Arkansas is the amount of US output that is produced in that state; it is defined as the value of all final goods produced in a given region for a specific period of time. Stated differently, it captures the amount of value-added (gross area product) over intermediate goods and services at each stage of the production process, that is, it eliminates the double counting in the Total

Expenditures concept. Using the example above, the Gross Product is \$1.25 (the value of the bread) rather than \$2.50. Alternatively, it may be viewed as the sum of the value-added by the farmer, \$0.50; the miller, \$0.25 (\$0.75 - \$0.50); and the baker, \$0.50 (\$1.25 - \$0.75). The total value-added is, therefore, \$1.25, which is equivalent to the final value of the bread. In many industries, the primary component of value-added is the wage and salary payments to employees.

The third gauge of economic activity used in this evaluation is **Personal Income**. As the name implies, Personal Income is simply the income received by individuals, whether in the form of wages, salaries, interest, dividends, proprietors' profits, or other sources. It may thus be viewed as the segment of overall impacts which flows directly to the citizenry.

The fourth measure, **Retail Sales**, represents the component of Total Expenditures which occurs in retail outlets (general merchandise stores, automobile dealers and service stations, building materials stores, food stores, drugstores, restaurants, and so forth). Retail Sales is a commonly used measure of consumer activity.

The final aggregates used are **Permanent Jobs and Person-Years of Employment**. The Person-Years of Employment measure reveals the full-time equivalent jobs generated by an activity. It should be noted that, unlike the dollar values described above, Permanent Jobs is a "stock" rather than a "flow." In other words, if an area produces \$1 million in output in 2016 and \$1 million in 2017, it is appropriate to say that \$2 million was achieved in the 2016-17 period. If the same area has 100 people working in 2016 and 100 in 2017, it only has 100 Permanent Jobs. When a flow of jobs is measured, such as in a construction project or a cumulative assessment over multiple years, it is appropriate to measure employment in Person-Years (a person working for a year). This concept is distinct from Permanent Jobs, which anticipates that the relevant positions will be maintained on a continuing basis.

Appendix C: Detailed Sectoral Results

Total Annual Impact of Direct Medical Expenses and Related Outlays Associated with Cancer Treatment

**The Total Annual Impact of Direct Medical Expenses and Related Outlays
Associated with Cancer Treatment on Business Activity in Texas:
Results by Detailed Industrial Category**

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$998,257,399)	(\$273,653,186)	(\$180,023,444)	(2,774)
Mining	(\$1,625,113,724)	(\$371,263,394)	(\$190,431,162)	(987)
Construction	(\$1,373,969,062)	(\$700,406,303)	(\$577,178,543)	(8,016)
Nondurable Manufacturing	(\$5,979,339,209)	(\$1,685,435,295)	(\$877,162,656)	(13,586)
Durable Manufacturing	(\$2,081,741,474)	(\$831,221,264)	(\$542,596,071)	(6,918)
Transportation and Utilities	(\$6,327,165,190)	(\$2,174,976,187)	(\$1,305,516,444)	(15,348)
Information	(\$1,323,562,213)	(\$811,470,214)	(\$350,480,939)	(3,198)
Wholesale Trade	(\$1,762,655,088)	(\$1,192,646,612)	(\$687,690,547)	(7,580)
Retail Trade (including Restaurants)	(\$7,082,534,085)	(\$5,315,094,976)	(\$3,090,180,730)	(93,420)
FIRE	(\$10,331,398,242)	(\$3,534,380,253)	(\$1,487,143,227)	(15,954)
Business Services	(\$3,183,304,432)	(\$2,024,758,442)	(\$1,651,684,027)	(19,838)
Health Services	(\$9,268,852,183)	(\$6,855,620,492)	(\$5,796,490,548)	(94,655)
Other Services	(\$3,292,791,555)	(\$1,698,742,842)	(\$1,355,999,509)	(31,847)
TOTAL	(\$54,630,683,854)	(\$27,469,669,460)	(\$18,092,577,846)	(314,121)

Source: US Multi-Regional Impact Assessment System, The Perryman Group

The Total Annual Impact of Direct Medical Expenses and Related Outlays Associated with Cancer Treatment on Business Activity in Texas: Comptroller's Economic Region Results					
Economic Region	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Real Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
High Plains	(\$1,863,182,630)	(\$963,198,122)	(\$634,963,396)	(\$273,683,438)	-11,268
Northwest Texas	(\$1,524,673,071)	(\$798,494,190)	(\$531,725,798)	(\$237,116,684)	-9,562
Metroplex	(\$14,212,268,721)	(\$7,127,219,304)	(\$4,647,787,010)	(\$1,748,283,337)	-79,725
Upper East Texas	(\$3,270,028,954)	(\$1,690,076,742)	(\$1,130,895,945)	(\$484,461,046)	-20,202
Southeast Texas	(\$2,224,604,586)	(\$1,161,927,138)	(\$787,840,695)	(\$349,321,666)	-14,123
Gulf Coast	(\$13,257,182,075)	(\$6,288,430,375)	(\$4,114,032,469)	(\$1,408,045,434)	-68,620
Capital	(\$2,946,935,299)	(\$1,557,458,634)	(\$1,027,569,733)	(\$418,897,922)	-17,966
Central Texas	(\$2,499,716,917)	(\$1,304,510,019)	(\$868,448,654)	(\$374,292,616)	-15,645
Alamo	(\$5,805,376,339)	(\$2,987,339,346)	(\$1,975,214,209)	(\$788,529,855)	-34,704
South Texas	(\$3,967,132,071)	(\$2,049,432,425)	(\$1,369,142,488)	(\$588,548,398)	-24,658
West Texas	(\$1,238,830,224)	(\$624,960,816)	(\$410,922,537)	(\$186,072,713)	-7,318
Upper Rio Grande	(\$1,820,752,968)	(\$916,622,348)	(\$594,034,911)	(\$225,280,977)	-10,332
TOTAL STATE IMPACT	(\$54,630,683,854)	(\$27,469,669,460)	(\$18,092,577,846)	(\$7,082,534,085)	-314,121
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group					

The Total Annual Impact of Direct Medical Expenses and Related Outlays Associated with Cancer Treatment on Business Activity in Texas: Council of Governments (COG) Region Results					
COG	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Real Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Panhandle	(\$943,458,999)	(\$479,379,808)	(\$315,102,669)	(\$140,492,331)	-5,609
South Plains	(\$919,723,630)	(\$483,818,314)	(\$319,860,727)	(\$133,191,106)	-5,659
Nortex	(\$611,282,969)	(\$325,154,418)	(\$217,753,474)	(\$98,431,625)	-3,923
North Central Texas	(\$13,628,586,149)	(\$6,818,111,952)	(\$4,439,995,017)	(\$1,657,568,269)	-75,979
Ark-Tex	(\$758,600,670)	(\$396,538,302)	(\$267,874,050)	(\$120,285,274)	-4,838
East Texas	(\$2,511,428,284)	(\$1,293,538,440)	(\$863,021,895)	(\$364,175,773)	-15,364
West Central Texas	(\$913,390,102)	(\$473,339,772)	(\$313,972,324)	(\$138,685,059)	-5,639
Rio Grande	(\$1,820,752,968)	(\$916,622,348)	(\$594,034,911)	(\$225,280,977)	-10,332
Permian Basin	(\$831,645,101)	(\$419,753,669)	(\$277,323,186)	(\$126,738,204)	-4,909
Concho Valley	(\$407,185,123)	(\$205,207,147)	(\$133,599,351)	(\$59,334,509)	-2,409
Heart of Texas	(\$1,030,492,265)	(\$523,885,582)	(\$345,086,929)	(\$142,959,383)	-6,178
Capital Area	(\$2,946,935,299)	(\$1,557,458,634)	(\$1,027,569,733)	(\$418,897,922)	-17,966
Brazos Valley	(\$600,103,023)	(\$312,839,926)	(\$207,782,490)	(\$94,122,214)	-3,755
Deep East Texas	(\$1,128,852,930)	(\$596,334,549)	(\$403,113,013)	(\$181,648,240)	-7,296
South East Texas	(\$1,095,751,657)	(\$565,592,588)	(\$384,727,682)	(\$167,673,426)	-6,827
Houston- Galveston Area	(\$13,257,182,075)	(\$6,288,430,375)	(\$4,114,032,469)	(\$1,408,045,434)	-68,620
Golden Crescent	(\$504,653,771)	(\$258,496,072)	(\$173,712,097)	(\$76,518,942)	-3,098
Alamo Area	(\$5,301,813,911)	(\$2,729,317,994)	(\$1,801,788,226)	(\$712,137,643)	-31,610
South Texas	(\$380,163,855)	(\$203,238,872)	(\$137,330,690)	(\$65,265,119)	-2,525
Coastal Bend	(\$1,474,339,188)	(\$723,369,933)	(\$480,255,302)	(\$208,320,948)	-8,509
Lower Rio Grande Valley	(\$1,815,145,304)	(\$962,975,811)	(\$643,899,085)	(\$266,500,360)	-11,648
Texoma	(\$583,682,572)	(\$309,107,353)	(\$207,791,993)	(\$90,715,068)	-3,745
Central Texas	(\$869,121,629)	(\$467,784,511)	(\$315,579,236)	(\$137,211,018)	-5,711
Middle Rio Grande	(\$296,392,381)	(\$159,373,088)	(\$107,371,297)	(\$48,335,239)	-1,971
Border Region	(\$4,314,581,040)	(\$2,243,380,811)	(\$1,483,418,660)	(\$605,780,003)	-26,490
TOTAL STATE IMPACT	(\$54,630,683,854)	(\$27,469,669,460)	(\$18,092,577,846)	(\$7,082,534,085)	-314,121
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group					

The Total Annual Impact of Direct Medical Expenses and Related Outlays Associated with Cancer Treatment on Business Activity in Texas: Metropolitan Statistical Area (MSA) and Rural Texas Results					
MSA	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Real Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Abilene	(\$446,145,559)	(\$226,604,351)	(\$149,374,900)	(\$59,922,952)	-2,623
Amarillo	(\$624,985,267)	(\$326,902,894)	(\$215,772,428)	(\$89,277,267)	-3,805
Austin-Round Rock	(\$2,536,197,509)	(\$1,349,248,541)	(\$890,854,795)	(\$359,592,397)	-15,522
Beaumont-Port Arthur	(\$1,114,791,531)	(\$576,959,910)	(\$392,720,616)	(\$171,973,435)	-6,974
Brownsville- Harlingen	(\$734,863,442)	(\$381,457,115)	(\$252,516,549)	(\$104,064,107)	-4,565
College Station- Bryan	(\$387,040,953)	(\$200,434,461)	(\$133,083,902)	(\$58,243,493)	-2,397
Corpus Christi	(\$1,168,573,605)	(\$562,918,763)	(\$372,440,840)	(\$156,295,031)	-6,531
Dallas-Plano-Irving MD*	(\$8,286,468,285)	(\$4,124,993,011)	(\$2,666,555,135)	(\$962,464,930)	-45,037
Fort Worth- Arlington MD*	(\$5,030,809,946)	(\$2,533,666,871)	(\$1,666,896,122)	(\$648,244,285)	-29,011
El Paso	(\$1,769,929,494)	(\$889,859,752)	(\$576,320,413)	(\$216,744,224)	-10,010
Houston-The Woodlands-Sugar Land	(\$12,749,911,430)	(\$6,022,275,912)	(\$3,934,836,828)	(\$1,324,142,781)	-65,335
Killeen-Temple	(\$753,289,454)	(\$406,740,192)	(\$274,255,564)	(\$117,027,111)	-4,953
Laredo	(\$288,678,645)	(\$152,743,307)	(\$102,476,109)	(\$47,080,907)	-1,865
Longview	(\$611,664,082)	(\$317,081,438)	(\$213,537,848)	(\$91,039,283)	-3,788
Lubbock	(\$713,023,971)	(\$378,625,589)	(\$250,956,296)	(\$97,174,953)	-4,392
McAllen-Edinburg- Mission	(\$1,044,221,553)	(\$561,523,012)	(\$378,058,752)	(\$155,826,099)	-6,836
Midland	(\$260,003,493)	(\$131,896,387)	(\$86,219,488)	(\$37,575,770)	-1,492
Odessa	(\$296,594,844)	(\$151,865,926)	(\$102,616,543)	(\$44,020,198)	-1,813
San Angelo	(\$293,006,155)	(\$147,291,077)	(\$95,504,765)	(\$40,255,392)	-1,717
San Antonio-New Braunfels	(\$4,950,660,194)	(\$2,549,070,731)	(\$1,682,343,264)	(\$659,132,695)	-29,450
Sherman-Denison	(\$361,212,110)	(\$195,625,900)	(\$132,049,449)	(\$56,983,201)	-2,392
Texarkana	(\$252,134,540)	(\$136,098,153)	(\$92,152,170)	(\$38,889,009)	-1,646
Tyler	(\$646,352,055)	(\$327,401,035)	(\$213,428,887)	(\$87,148,308)	-3,768
Victoria	(\$264,095,494)	(\$134,511,574)	(\$90,590,758)	(\$38,708,967)	-1,593
Waco	(\$742,655,165)	(\$376,398,290)	(\$246,370,156)	(\$97,496,251)	-4,370
Wichita Falls	(\$379,466,799)	(\$206,014,033)	(\$138,605,938)	(\$60,619,606)	-2,484
Rural Area	(\$7,923,908,281)	(\$4,101,461,235)	(\$2,742,039,331)	(\$1,262,591,436)	-49,753
TOTAL STATE IMPACT	(\$54,630,683,854)	(\$27,469,669,460)	(\$18,092,577,846)	(\$7,082,534,085)	-314,121
*Metropolitan Division SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group					

**The Total Annual Impact of Direct Medical Expenses and Related Outlays
Associated with Cancer Treatment on Business Activity in Texas:
County Results**

County	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Anderson	(\$130,398,051)	(\$71,847,488)	(\$48,845,608)	(\$20,380,147)	-870
Andrews	(\$26,351,338)	(\$13,008,119)	(\$8,301,055)	(\$4,195,315)	-145
Angelina	(\$246,638,298)	(\$129,049,029)	(\$86,707,803)	(\$37,538,696)	-1,563
Aransas	(\$105,444,783)	(\$48,841,277)	(\$31,117,229)	(\$15,573,608)	-562
Archer	(\$16,960,061)	(\$8,384,813)	(\$5,369,277)	(\$2,955,431)	-100
Armstrong	(\$6,385,073)	(\$3,313,680)	(\$2,275,481)	(\$685,606)	-38
Atascosa	(\$102,933,857)	(\$50,978,425)	(\$34,111,504)	(\$14,313,316)	-598
Austin	(\$72,561,100)	(\$34,117,024)	(\$21,821,345)	(\$9,027,664)	-364
Bailey	(\$9,984,804)	(\$5,122,244)	(\$3,210,821)	(\$1,802,396)	-57
Bandera	(\$67,079,122)	(\$33,452,390)	(\$21,647,681)	(\$10,712,482)	-394
Bastrop	(\$171,851,560)	(\$85,526,864)	(\$55,698,629)	(\$26,376,110)	-1,011
Baylor	(\$16,330,775)	(\$8,800,023)	(\$5,943,435)	(\$2,610,605)	-106
Bee	(\$52,997,571)	(\$28,584,326)	(\$19,469,054)	(\$9,002,085)	-357
Bell	(\$562,503,270)	(\$306,523,396)	(\$207,343,697)	(\$86,600,062)	-3,720
Bexar	(\$3,972,076,030)	(\$2,058,483,657)	(\$1,360,318,605)	(\$508,977,910)	-23,563
Blanco	(\$27,195,779)	(\$13,471,596)	(\$8,711,050)	(\$3,936,007)	-157
Borden	(\$7,381,689)	(\$3,361,355)	(\$2,015,153)	(\$1,013,772)	-33
Bosque	(\$60,606,996)	(\$31,610,013)	(\$21,388,412)	(\$7,924,436)	-377
Bowie	(\$252,134,540)	(\$136,098,153)	(\$92,152,170)	(\$38,889,009)	-1,646
Brazoria	(\$559,653,782)	(\$271,874,364)	(\$180,163,056)	(\$87,376,055)	-3,257
Brazos	(\$289,528,233)	(\$149,918,648)	(\$99,313,533)	(\$40,419,364)	-1,773
Brewster	(\$22,930,485)	(\$12,748,711)	(\$8,619,283)	(\$3,690,855)	-154
Briscoe	(\$4,074,555)	(\$1,833,264)	(\$1,128,056)	(\$715,362)	-21
Brooks	(\$13,767,190)	(\$7,785,754)	(\$5,451,835)	(\$2,700,626)	-102
Brown	(\$108,242,656)	(\$60,864,333)	(\$41,389,425)	(\$19,354,484)	-773
Burleson	(\$48,893,772)	(\$25,442,934)	(\$16,923,106)	(\$9,002,085)	-309
Burnet	(\$129,286,407)	(\$64,546,881)	(\$42,033,916)	(\$18,544,296)	-750
Caldwell	(\$93,186,730)	(\$47,451,735)	(\$32,312,134)	(\$13,863,212)	-580
Calhoun	(\$33,375,517)	(\$13,917,397)	(\$8,961,263)	(\$4,520,552)	-160
Callahan	(\$44,618,062)	(\$21,777,844)	(\$14,288,099)	(\$6,751,564)	-257
Cameron	(\$734,863,442)	(\$381,457,115)	(\$252,516,549)	(\$104,064,107)	-4,565
Camp	(\$31,154,262)	(\$16,443,003)	(\$11,244,347)	(\$4,393,555)	-201
Carson	(\$7,343,971)	(\$2,903,260)	(\$1,700,571)	(\$562,205)	-28
Cass	(\$84,987,260)	(\$44,212,094)	(\$29,995,176)	(\$14,949,618)	-550
Castro	(\$8,535,020)	(\$3,908,721)	(\$2,449,781)	(\$1,473,008)	-47
Chambers	(\$64,663,734)	(\$25,868,852)	(\$16,138,532)	(\$7,471,423)	-282
Cherokee	(\$130,024,316)	(\$69,855,116)	(\$48,053,243)	(\$20,277,582)	-869
Childress	(\$17,966,620)	(\$9,384,560)	(\$6,346,092)	(\$3,060,709)	-118
Clay	(\$30,090,452)	(\$15,272,172)	(\$10,369,469)	(\$4,281,808)	-181
Cochran	(\$3,919,570)	(\$1,866,453)	(\$1,194,582)	(\$541,076)	-21
Coke	(\$12,494,602)	(\$6,060,737)	(\$3,911,877)	(\$2,076,023)	-69
Coleman	(\$33,695,213)	(\$17,675,803)	(\$11,858,923)	(\$5,311,230)	-213
Collin	(\$1,158,030,390)	(\$603,342,370)	(\$398,021,563)	(\$163,263,711)	-6,902
Collingsworth	(\$7,812,592)	(\$4,214,235)	(\$2,814,956)	(\$1,467,121)	-51

**The Total Annual Impact of Direct Medical Expenses and Related Outlays
Associated with Cancer Treatment on Business Activity in Texas:
County Results**

County	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Colorado	(\$74,149,511)	(\$38,368,061)	(\$25,889,107)	(\$11,957,455)	-484
Comal	(\$288,456,141)	(\$147,048,182)	(\$96,606,592)	(\$41,679,656)	-1,763
Comanche	(\$45,228,132)	(\$23,989,244)	(\$16,209,343)	(\$6,713,635)	-288
Concho	(\$7,737,962)	(\$4,228,480)	(\$2,972,452)	(\$1,133,138)	-53
Cooke	(\$110,345,829)	(\$53,840,078)	(\$35,586,703)	(\$17,193,983)	-637
Coryell	(\$123,017,224)	(\$64,798,970)	(\$43,189,442)	(\$19,624,546)	-794
Cottle	(\$6,451,577)	(\$3,686,005)	(\$2,493,167)	(\$1,048,266)	-43
Crane	(\$5,129,931)	(\$2,784,694)	(\$1,933,237)	(\$712,380)	-34
Crockett	(\$6,343,467)	(\$3,174,216)	(\$2,023,518)	(\$1,440,334)	-40
Crosby	(\$14,539,833)	(\$8,048,180)	(\$5,520,102)	(\$1,696,327)	-95
Culberson	(\$3,905,100)	(\$2,219,936)	(\$1,488,146)	(\$990,229)	-30
Dallam	(\$10,010,273)	(\$5,086,305)	(\$3,189,707)	(\$1,469,376)	-57
Dallas	(\$5,260,658,175)	(\$2,580,979,275)	(\$1,650,641,975)	(\$537,897,116)	-27,184
Dawson	(\$30,160,118)	(\$14,516,869)	(\$8,920,808)	(\$5,192,423)	-164
Deaf Smith	(\$21,878,263)	(\$10,468,817)	(\$6,665,894)	(\$2,811,861)	-117
Delta	(\$14,100,912)	(\$7,456,521)	(\$5,161,519)	(\$1,421,488)	-86
Denton	(\$1,023,524,425)	(\$513,185,998)	(\$335,107,193)	(\$130,710,280)	-5,808
DeWitt	(\$66,730,455)	(\$35,280,861)	(\$23,864,433)	(\$10,082,336)	-429
Dickens	(\$7,295,238)	(\$3,764,229)	(\$2,471,477)	(\$1,307,503)	-44
Dimmit	(\$15,655,235)	(\$8,311,688)	(\$5,745,364)	(\$2,880,667)	-108
Donley	(\$13,058,180)	(\$7,434,547)	(\$5,159,490)	(\$2,610,605)	-98
Duval	(\$23,833,125)	(\$12,126,657)	(\$8,269,851)	(\$3,175,899)	-147
Eastland	(\$57,107,868)	(\$28,836,919)	(\$19,217,254)	(\$9,812,273)	-360
Ector	(\$296,594,844)	(\$151,865,926)	(\$102,616,543)	(\$44,020,198)	-1,813
Edwards	(\$4,295,905)	(\$2,066,735)	(\$1,238,140)	(\$733,030)	-23
El Paso	(\$1,767,161,645)	(\$888,495,221)	(\$575,512,467)	(\$215,960,029)	-9,992
Ellis	(\$277,514,203)	(\$133,469,302)	(\$86,112,311)	(\$41,743,240)	-1,565
Erath	(\$77,619,082)	(\$42,943,731)	(\$29,440,282)	(\$13,593,149)	-545
Falls	(\$52,602,813)	(\$28,600,041)	(\$19,497,060)	(\$7,835,480)	-347
Fannin	(\$112,124,633)	(\$59,641,375)	(\$40,155,841)	(\$16,537,884)	-717
Fayette	(\$101,969,572)	(\$52,535,184)	(\$34,787,518)	(\$14,043,253)	-616
Fisher	(\$11,914,772)	(\$6,527,946)	(\$4,392,023)	(\$1,968,068)	-79
Floyd	(\$12,159,427)	(\$5,710,680)	(\$3,631,338)	(\$1,400,596)	-63
Foard	(\$3,075,218)	(\$1,753,414)	(\$1,237,973)	(\$467,297)	-22
Fort Bend	(\$935,285,134)	(\$442,764,289)	(\$284,642,093)	(\$122,177,152)	-4,900
Franklin	(\$23,807,837)	(\$12,216,113)	(\$8,205,018)	(\$3,700,355)	-149
Freestone	(\$50,840,745)	(\$25,380,812)	(\$16,607,420)	(\$9,002,085)	-307
Frio	(\$33,355,156)	(\$16,567,850)	(\$10,931,212)	(\$4,807,081)	-195
Gaines	(\$19,565,502)	(\$8,790,318)	(\$5,409,930)	(\$2,955,769)	-96
Galveston	(\$857,643,881)	(\$426,095,827)	(\$282,084,886)	(\$116,036,881)	-4,961
Garza	(\$10,439,031)	(\$4,869,631)	(\$3,092,133)	(\$1,810,826)	-56
Gillespie	(\$96,859,755)	(\$49,772,053)	(\$33,251,675)	(\$14,403,337)	-601
Glasscock	(\$993,186)	(\$425,137)	(\$252,411)	(\$86,507)	-4
Goliad	(\$17,662,966)	(\$9,520,179)	(\$6,578,883)	(\$3,690,855)	-125

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Gonzales	(\$37,873,446)	(\$20,043,659)	(\$13,664,388)	(\$5,989,599)	-247
Gray	(\$73,238,595)	(\$36,284,606)	(\$24,532,422)	(\$11,477,183)	-440
Grayson	(\$361,212,110)	(\$195,625,900)	(\$132,049,449)	(\$56,983,201)	-2,392
Gregg	(\$363,731,558)	(\$193,679,500)	(\$131,413,909)	(\$53,742,450)	-2,325
Grimes	(\$45,162,998)	(\$23,403,253)	(\$15,758,751)	(\$7,664,898)	-288
Guadalupe	(\$230,091,581)	(\$114,970,094)	(\$74,836,852)	(\$39,879,238)	-1,400
Hale	(\$58,853,675)	(\$32,495,563)	(\$21,946,472)	(\$11,262,345)	-412
Hall	(\$11,364,947)	(\$5,833,888)	(\$3,761,557)	(\$1,725,979)	-67
Hamilton	(\$24,660,882)	(\$12,978,444)	(\$8,818,360)	(\$4,230,980)	-162
Hansford	(\$6,304,576)	(\$2,543,198)	(\$1,489,994)	(\$747,230)	-25
Hardeman	(\$11,229,515)	(\$6,112,476)	(\$4,066,341)	(\$2,430,563)	-79
Hardin	(\$139,456,624)	(\$70,283,870)	(\$46,236,660)	(\$22,865,297)	-838
Harris	(\$8,945,225,803)	(\$4,171,875,917)	(\$2,718,156,391)	(\$812,483,993)	-44,082
Harrison	(\$194,633,475)	(\$94,050,010)	(\$63,234,480)	(\$23,652,857)	-1,079
Hartley	(\$2,715,841)	(\$1,297,798)	(\$834,237)	(\$393,055)	-15
Haskell	(\$17,630,422)	(\$9,370,896)	(\$6,477,465)	(\$2,637,636)	-114
Hays	(\$243,482,720)	(\$128,234,890)	(\$84,896,190)	(\$36,728,509)	-1,525
Hemphill	(\$4,359,143)	(\$1,999,381)	(\$1,273,165)	(\$591,058)	-22
Henderson	(\$310,947,633)	(\$158,369,393)	(\$104,634,975)	(\$44,560,323)	-1,876
Hidalgo	(\$1,044,221,553)	(\$561,523,012)	(\$378,058,752)	(\$155,826,099)	-6,836
Hill	(\$113,647,260)	(\$57,010,968)	(\$37,555,728)	(\$17,644,087)	-703
Hockley	(\$39,613,024)	(\$20,222,201)	(\$13,655,389)	(\$6,718,630)	-253
Hood	(\$183,302,731)	(\$93,230,102)	(\$62,199,795)	(\$27,456,361)	-1,116
Hopkins	(\$87,902,460)	(\$45,552,963)	(\$30,237,057)	(\$15,933,691)	-559
Houston	(\$87,759,817)	(\$44,477,353)	(\$30,061,995)	(\$10,128,807)	-505
Howard	(\$92,647,751)	(\$46,471,639)	(\$31,163,155)	(\$13,773,191)	-557
Hudspeth	(\$2,767,849)	(\$1,364,531)	(\$807,946)	(\$784,194)	-17
Hunt	(\$212,331,412)	(\$110,575,100)	(\$73,781,921)	(\$35,738,279)	-1,355
Hutchinson	(\$51,227,150)	(\$23,275,186)	(\$14,951,925)	(\$10,381,928)	-283
Irion	(\$3,434,055)	(\$1,349,670)	(\$780,201)	(\$466,175)	-14
Jack	(\$18,772,853)	(\$8,993,168)	(\$5,823,245)	(\$3,318,956)	-106
Jackson	(\$31,192,969)	(\$15,666,661)	(\$10,087,185)	(\$5,781,363)	-187
Jasper	(\$105,056,382)	(\$56,443,702)	(\$38,459,938)	(\$17,760,697)	-707
Jeff Davis	(\$8,131,247)	(\$4,230,645)	(\$2,835,717)	(\$1,245,064)	-51
Jefferson	(\$730,224,855)	(\$379,739,290)	(\$259,956,578)	(\$107,574,921)	-4,565
Jim Hogg	(\$10,195,135)	(\$5,065,865)	(\$3,186,667)	(\$2,160,501)	-61
Jim Wells	(\$82,196,968)	(\$45,618,926)	(\$30,850,524)	(\$14,043,253)	-560
Johnson	(\$350,867,436)	(\$181,242,617)	(\$122,208,424)	(\$52,122,075)	-2,201
Jones	(\$57,850,593)	(\$29,906,373)	(\$20,128,585)	(\$8,070,940)	-358
Karnes	(\$43,890,407)	(\$20,976,099)	(\$13,818,275)	(\$6,211,439)	-245
Kaufman	(\$228,784,848)	(\$117,820,399)	(\$78,966,010)	(\$34,928,091)	-1,445
Kendall	(\$90,595,190)	(\$44,064,055)	(\$28,695,184)	(\$13,413,107)	-516
Kenedy	(\$2,444,109)	(\$1,140,874)	(\$725,731)	(\$688,860)	-17
Kent	(\$2,799,714)	(\$1,276,761)	(\$782,114)	(\$406,595)	-13

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Kerr	(\$175,957,056)	(\$92,456,541)	(\$61,157,686)	(\$27,456,361)	-1,114
Kimble	(\$15,931,120)	(\$7,225,540)	(\$4,477,952)	(\$2,430,563)	-82
King	(\$3,417,745)	(\$1,608,771)	(\$998,246)	(\$362,446)	-16
Kinney	(\$12,582,969)	(\$5,991,104)	(\$3,733,285)	(\$1,939,040)	-69
Kleberg	(\$68,793,414)	(\$35,355,051)	(\$23,740,782)	(\$10,532,440)	-431
Knox	(\$10,811,628)	(\$5,732,461)	(\$3,871,042)	(\$1,444,512)	-67
La Salle	(\$10,175,516)	(\$5,517,774)	(\$3,756,768)	(\$1,890,438)	-71
Lamar	(\$155,366,386)	(\$80,384,756)	(\$54,509,201)	(\$24,377,935)	-991
Lamb	(\$23,181,248)	(\$11,101,450)	(\$7,244,957)	(\$3,460,828)	-128
Lampasas	(\$67,768,959)	(\$35,417,826)	(\$23,722,425)	(\$10,802,503)	-439
Lavaca	(\$71,385,890)	(\$39,075,920)	(\$26,544,070)	(\$11,436,125)	-482
Lee	(\$42,380,599)	(\$21,155,359)	(\$13,868,105)	(\$6,308,152)	-246
Leon	(\$40,452,519)	(\$20,676,572)	(\$13,032,622)	(\$8,391,983)	-246
Liberty	(\$201,202,737)	(\$105,504,302)	(\$71,784,599)	(\$29,988,536)	-1,266
Limestone	(\$62,742,100)	(\$33,485,498)	(\$23,165,213)	(\$10,892,523)	-422
Lipscomb	(\$6,962,400)	(\$3,037,605)	(\$1,838,076)	(\$796,649)	-32
Live Oak	(\$43,826,706)	(\$21,089,471)	(\$13,880,668)	(\$7,561,752)	-255
Llano	(\$109,905,432)	(\$56,501,074)	(\$37,314,350)	(\$16,473,816)	-674
Loving	(\$1,158,763)	(\$381,978)	(\$241,139)	(\$126,461)	-4
Lubbock	(\$688,874,315)	(\$365,886,924)	(\$242,490,312)	(\$94,521,897)	-4,249
Lynn	(\$9,609,823)	(\$4,690,485)	(\$2,945,883)	(\$956,729)	-48
Madison	(\$29,275,144)	(\$15,440,697)	(\$10,309,197)	(\$5,041,168)	-191
Marion	(\$38,403,815)	(\$19,925,058)	(\$13,487,566)	(\$6,301,460)	-251
Martin	(\$8,276,646)	(\$4,076,420)	(\$2,736,600)	(\$1,069,024)	-47
Mason	(\$16,946,054)	(\$8,527,272)	(\$5,594,136)	(\$2,520,584)	-101
Matagorda	(\$91,161,028)	(\$42,675,662)	(\$28,013,185)	(\$16,146,995)	-519
Maverick	(\$77,678,237)	(\$40,915,505)	(\$27,351,036)	(\$12,602,920)	-509
McCulloch	(\$28,492,959)	(\$15,147,563)	(\$10,305,691)	(\$4,591,064)	-185
McLennan	(\$690,052,352)	(\$347,798,250)	(\$226,873,096)	(\$89,660,771)	-4,023
McMullen	(\$1,091,343)	(\$474,720)	(\$286,114)	(\$126,731)	-5
Medina	(\$101,984,771)	(\$50,433,768)	(\$32,849,568)	(\$15,303,545)	-604
Menard	(\$7,281,375)	(\$3,696,166)	(\$2,330,897)	(\$1,440,334)	-43
Midland	(\$251,726,847)	(\$127,819,968)	(\$83,482,888)	(\$36,506,746)	-1,446
Milam	(\$61,888,629)	(\$31,538,767)	(\$21,338,179)	(\$10,540,015)	-390
Mills	(\$12,428,132)	(\$7,392,184)	(\$5,128,277)	(\$2,352,203)	-94
Mitchell	(\$22,332,708)	(\$11,953,718)	(\$8,089,949)	(\$3,654,133)	-145
Montague	(\$70,444,988)	(\$35,364,004)	(\$23,411,987)	(\$10,532,440)	-428
Montgomery	(\$1,039,460,072)	(\$511,259,444)	(\$339,803,762)	(\$127,878,365)	-5,841
Moore	(\$32,732,572)	(\$13,915,111)	(\$8,750,597)	(\$4,505,151)	-155
Morris	(\$34,796,896)	(\$15,882,096)	(\$10,645,103)	(\$3,778,927)	-182
Motley	(\$5,187,364)	(\$2,519,655)	(\$1,592,691)	(\$773,611)	-29
Nacogdoches	(\$146,106,565)	(\$79,445,234)	(\$54,495,863)	(\$24,935,777)	-1,015
Navarro	(\$141,278,464)	(\$72,221,771)	(\$48,618,646)	(\$19,402,694)	-869
Newton	(\$19,039,874)	(\$11,367,321)	(\$7,992,934)	(\$4,300,009)	-147

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Nolan	(\$49,253,134)	(\$25,745,426)	(\$16,916,189)	(\$7,826,453)	-305
Nueces	(\$905,265,765)	(\$436,458,922)	(\$288,764,777)	(\$115,046,652)	-5,006
Ochiltree	(\$12,558,967)	(\$5,733,549)	(\$3,636,650)	(\$1,901,034)	-64
Oldham	(\$1,478,941)	(\$797,311)	(\$522,530)	(\$418,472)	-11
Orange	(\$226,070,177)	(\$115,569,429)	(\$78,534,443)	(\$37,233,208)	-1,423
Palo Pinto	(\$92,410,372)	(\$44,286,566)	(\$28,484,833)	(\$13,863,212)	-518
Panola	(\$66,091,370)	(\$33,421,191)	(\$22,661,279)	(\$10,016,596)	-403
Parker	(\$269,490,928)	(\$128,262,089)	(\$81,631,270)	(\$39,519,155)	-1,477
Parmer	(\$7,155,705)	(\$3,097,988)	(\$2,010,161)	(\$537,387)	-34
Pecos	(\$25,342,914)	(\$12,765,019)	(\$8,372,640)	(\$4,591,064)	-157
Polk	(\$192,871,411)	(\$101,467,473)	(\$67,507,304)	(\$32,857,612)	-1,217
Potter	(\$326,537,472)	(\$171,327,664)	(\$114,003,234)	(\$44,830,385)	-1,991
Presidio	(\$15,856,642)	(\$7,563,303)	(\$4,771,353)	(\$2,610,605)	-87
Rains	(\$27,157,266)	(\$12,387,668)	(\$7,501,983)	(\$5,001,572)	-140
Randall	(\$283,239,810)	(\$148,560,979)	(\$97,270,612)	(\$42,780,600)	-1,736
Reagan	(\$3,618,840)	(\$1,771,257)	(\$1,082,093)	(\$774,215)	-20
Real	(\$15,243,517)	(\$7,358,561)	(\$4,811,092)	(\$2,160,501)	-86
Red River	(\$49,258,057)	(\$25,593,431)	(\$17,067,162)	(\$7,079,186)	-307
Reeves	(\$23,538,672)	(\$11,719,695)	(\$7,655,787)	(\$4,681,084)	-147
Refugio	(\$17,906,500)	(\$8,750,111)	(\$5,426,016)	(\$4,321,001)	-109
Roberts	(\$1,518,319)	(\$658,367)	(\$392,848)	(\$352,810)	-8
Robertson	(\$48,618,948)	(\$25,072,879)	(\$16,847,263)	(\$8,822,044)	-314
Rockwall	(\$125,624,832)	(\$65,620,568)	(\$43,924,161)	(\$18,184,213)	-778
Runnels	(\$36,625,270)	(\$16,810,131)	(\$10,764,735)	(\$5,012,912)	-194
Rusk	(\$133,050,008)	(\$65,431,140)	(\$44,132,811)	(\$18,752,537)	-781
Sabine	(\$39,837,941)	(\$20,553,951)	(\$14,318,229)	(\$6,632,841)	-261
San Augustine	(\$34,008,925)	(\$17,177,476)	(\$11,504,520)	(\$4,716,777)	-204
San Jacinto	(\$74,893,495)	(\$37,704,804)	(\$24,900,995)	(\$12,242,836)	-455
San Patricio	(\$157,863,056)	(\$77,618,564)	(\$52,558,834)	(\$25,674,772)	-964
San Saba	(\$16,854,533)	(\$9,134,925)	(\$6,038,855)	(\$3,060,709)	-113
Schleicher	(\$5,134,068)	(\$2,718,503)	(\$1,905,445)	(\$512,362)	-32
Scurry	(\$34,559,944)	(\$18,226,634)	(\$11,544,940)	(\$7,164,080)	-219
Shackelford	(\$6,839,623)	(\$3,398,391)	(\$2,226,123)	(\$1,142,687)	-41
Shelby	(\$59,299,002)	(\$32,194,022)	(\$22,384,983)	(\$10,091,291)	-408
Sherman	(\$1,685,254)	(\$705,711)	(\$426,421)	(\$211,487)	-8
Smith	(\$646,352,055)	(\$327,401,035)	(\$213,428,887)	(\$87,148,308)	-3,768
Somervell	(\$11,741,088)	(\$5,809,618)	(\$4,028,570)	(\$1,174,384)	-69
Starr	(\$62,602,694)	(\$35,569,195)	(\$24,980,014)	(\$12,422,878)	-472
Stephens	(\$23,313,804)	(\$12,671,832)	(\$8,433,450)	(\$5,012,269)	-159
Sterling	(\$1,777,713)	(\$992,846)	(\$663,758)	(\$450,104)	-13
Stonewall	(\$3,934,827)	(\$2,179,910)	(\$1,480,772)	(\$821,972)	-28
Sutton	(\$8,420,808)	(\$4,373,491)	(\$2,826,769)	(\$1,710,396)	-53
Swisher	(\$11,804,312)	(\$5,433,228)	(\$3,401,450)	(\$1,654,269)	-62
Tarrant	(\$4,104,641,494)	(\$2,068,889,298)	(\$1,360,065,061)	(\$508,887,889)	-23,478

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Taylor	(\$343,676,904)	(\$174,920,134)	(\$114,958,215)	(\$45,100,448)	-2,009
Terrell	(\$2,126,532)	(\$1,170,691)	(\$782,677)	(\$398,307)	-14
Terry	(\$21,781,880)	(\$10,764,122)	(\$6,601,156)	(\$4,484,961)	-126
Throckmorton	(\$2,954,828)	(\$1,475,017)	(\$943,677)	(\$479,168)	-17
Titus	(\$56,246,322)	(\$29,142,175)	(\$19,901,644)	(\$10,155,065)	-369
Tom Green	(\$289,572,100)	(\$145,941,407)	(\$94,724,564)	(\$39,789,218)	-1,704
Travis	(\$1,605,940,395)	(\$862,110,872)	(\$567,685,385)	(\$214,105,742)	-9,725
Trinity	(\$57,436,913)	(\$31,459,965)	(\$21,224,729)	(\$9,792,445)	-390
Tyler	(\$65,904,306)	(\$34,994,217)	(\$23,553,721)	(\$10,650,452)	-424
Upshur	(\$114,882,516)	(\$57,970,798)	(\$37,991,127)	(\$18,544,296)	-682
Upton	(\$6,802,838)	(\$3,382,363)	(\$2,198,662)	(\$982,441)	-39
Uvalde	(\$61,559,779)	(\$32,586,769)	(\$21,943,260)	(\$9,452,190)	-400
Val Verde	(\$85,031,144)	(\$48,218,200)	(\$32,804,052)	(\$13,863,212)	-593
Van Zandt	(\$148,208,686)	(\$83,529,119)	(\$57,017,445)	(\$25,926,006)	-1,048
Victoria	(\$246,432,529)	(\$124,991,395)	(\$84,011,874)	(\$35,018,112)	-1,468
Walker	(\$230,030,675)	(\$124,978,016)	(\$84,252,752)	(\$37,178,613)	-1,533
Waller	(\$74,215,186)	(\$32,915,893)	(\$20,242,164)	(\$11,702,711)	-382
Ward	(\$22,136,558)	(\$11,326,750)	(\$7,386,134)	(\$4,230,980)	-138
Washington	(\$98,171,409)	(\$52,884,943)	(\$35,598,018)	(\$14,780,672)	-633
Webb	(\$288,678,645)	(\$152,743,307)	(\$102,476,109)	(\$47,080,907)	-1,865
Wharton	(\$111,929,432)	(\$60,132,723)	(\$41,040,596)	(\$18,619,589)	-749
Wheeler	(\$11,510,448)	(\$6,330,849)	(\$4,276,761)	(\$2,331,802)	-81
Wichita	(\$332,416,286)	(\$182,357,048)	(\$122,867,191)	(\$53,382,367)	-2,203
Wilbarger	(\$47,982,458)	(\$24,592,970)	(\$16,567,738)	(\$7,291,689)	-297
Willacy	(\$36,060,308)	(\$19,995,684)	(\$13,323,784)	(\$6,610,154)	-247
Williamson	(\$421,736,105)	(\$225,924,180)	(\$150,262,456)	(\$68,518,824)	-2,682
Wilson	(\$97,443,501)	(\$49,640,159)	(\$33,277,278)	(\$14,853,441)	-611
Winkler	(\$11,710,971)	(\$5,886,728)	(\$3,854,366)	(\$2,202,543)	-71
Wise	(\$110,766,269)	(\$56,233,147)	(\$36,763,003)	(\$19,084,421)	-669
Wood	(\$176,393,272)	(\$89,227,922)	(\$59,374,234)	(\$25,478,085)	-1,071
Yoakum	(\$10,866,655)	(\$5,147,728)	(\$3,265,168)	(\$2,090,936)	-62
Young	(\$57,528,787)	(\$29,838,326)	(\$19,603,651)	(\$10,112,205)	-357
Zapata	(\$18,687,381)	(\$9,860,505)	(\$6,687,899)	(\$3,600,834)	-126
Zavala	(\$14,170,077)	(\$8,406,753)	(\$5,988,300)	(\$2,813,243)	-114
TOTAL STATE IMPACT	(\$54,630,683,854)	(\$27,469,669,460)	(\$18,092,577,846)	(\$7,082,534,085)	-314,121

NOTE: Allocations reflect best available evidence regarding incidence and industrial structure and composition of each area.
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

**The Total Annual Impact of Direct Medical Expenses and Related Outlays
Associated with Cancer Treatment on Business Activity in Texas:
Results by Texas House District**

House District	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
1	(\$480,566,819)	(\$254,292,453)	(\$171,933,551)	(\$74,046,485)	-3,093
2	(\$448,442,558)	(\$239,657,182)	(\$161,036,423)	(\$77,597,976)	-2,962
3	(\$350,711,565)	(\$168,910,905)	(\$110,629,965)	(\$45,718,356)	-1,936
4	(\$486,871,383)	(\$249,266,995)	(\$165,813,039)	(\$71,913,159)	-3,002
5	(\$480,872,512)	(\$241,659,114)	(\$159,890,244)	(\$69,722,797)	-2,867
6	(\$491,227,562)	(\$248,824,786)	(\$162,205,954)	(\$66,232,714)	-2,864
7	(\$478,614,074)	(\$251,650,298)	(\$169,405,036)	(\$72,286,746)	-3,006
8	(\$436,164,520)	(\$226,461,039)	(\$151,627,402)	(\$66,429,014)	-2,749
9	(\$483,252,865)	(\$244,356,325)	(\$166,081,713)	(\$71,644,663)	-2,952
10	(\$330,375,301)	(\$160,392,099)	(\$103,900,257)	(\$49,318,494)	-1,884
11	(\$409,180,890)	(\$214,731,490)	(\$146,681,917)	(\$63,965,895)	-2,665
12	(\$417,304,083)	(\$215,484,877)	(\$143,461,630)	(\$60,915,376)	-2,573
13	(\$512,294,253)	(\$265,827,319)	(\$177,321,915)	(\$77,912,154)	-3,176
14	(\$243,203,716)	(\$125,931,664)	(\$83,423,368)	(\$33,952,265)	-1,490
15	(\$381,481,847)	(\$187,632,216)	(\$124,707,981)	(\$46,931,360)	-2,144
16	(\$381,481,847)	(\$187,632,216)	(\$124,707,981)	(\$46,931,360)	-2,144
17	(\$389,182,741)	(\$195,153,716)	(\$129,361,532)	(\$58,748,512)	-2,330
18	(\$506,126,907)	(\$268,187,122)	(\$180,938,346)	(\$79,409,985)	-3,254
19	(\$522,328,597)	(\$274,556,584)	(\$183,750,557)	(\$88,434,067)	-3,333
20	(\$283,956,979)	(\$145,788,968)	(\$96,429,835)	(\$44,158,453)	-1,730
21	(\$488,951,125)	(\$252,275,573)	(\$172,118,812)	(\$75,960,180)	-3,067
22	(\$467,343,907)	(\$243,033,146)	(\$166,372,210)	(\$68,847,949)	-2,922
23	(\$442,027,041)	(\$213,351,016)	(\$140,255,882)	(\$58,527,651)	-2,465
24	(\$480,280,573)	(\$238,613,663)	(\$157,967,536)	(\$64,980,653)	-2,778
25	(\$337,408,692)	(\$162,300,383)	(\$107,284,929)	(\$54,592,459)	-1,952
26	(\$254,397,557)	(\$120,431,887)	(\$77,422,649)	(\$33,232,185)	-1,333
27	(\$254,397,557)	(\$120,431,887)	(\$77,422,649)	(\$33,232,185)	-1,333
28	(\$254,397,557)	(\$120,431,887)	(\$77,422,649)	(\$33,232,185)	-1,333
29	(\$313,406,118)	(\$152,249,644)	(\$100,891,311)	(\$48,930,591)	-1,824
30	(\$487,552,751)	(\$241,301,220)	(\$159,959,700)	(\$73,206,464)	-2,852
31	(\$306,929,984)	(\$159,744,417)	(\$107,972,937)	(\$51,651,154)	-1,975
32	(\$443,580,225)	(\$213,864,872)	(\$141,494,741)	(\$56,372,859)	-2,453
33	(\$264,588,479)	(\$138,021,652)	(\$91,686,748)	(\$37,775,858)	-1,606
34	(\$461,685,540)	(\$222,594,050)	(\$147,270,036)	(\$58,673,792)	-2,553
35	(\$258,587,144)	(\$136,722,655)	(\$91,319,334)	(\$37,636,639)	-1,651
36	(\$227,640,299)	(\$122,412,017)	(\$82,416,808)	(\$33,970,090)	-1,490
37	(\$308,642,646)	(\$160,211,988)	(\$106,056,951)	(\$43,706,925)	-1,917
38	(\$301,294,011)	(\$156,397,417)	(\$103,531,785)	(\$42,666,284)	-1,872
39	(\$227,640,299)	(\$122,412,017)	(\$82,416,808)	(\$33,970,090)	-1,490
40	(\$227,640,299)	(\$122,412,017)	(\$82,416,808)	(\$33,970,090)	-1,490
41	(\$227,640,299)	(\$122,412,017)	(\$82,416,808)	(\$33,970,090)	-1,490
42	(\$184,754,333)	(\$97,755,716)	(\$65,584,710)	(\$30,131,780)	-1,194
43	(\$361,851,009)	(\$187,176,867)	(\$126,619,194)	(\$59,252,550)	-2,311
44	(\$327,535,082)	(\$164,610,254)	(\$108,114,130)	(\$54,732,679)	-2,011
45	(\$270,678,499)	(\$141,706,486)	(\$93,607,240)	(\$40,664,515)	-1,681

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House District	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
46	(\$261,768,284)	(\$140,524,072)	(\$92,532,718)	(\$34,899,236)	-1,585
47	(\$273,009,867)	(\$146,558,848)	(\$96,506,515)	(\$36,397,976)	-1,653
48	(\$273,009,867)	(\$146,558,848)	(\$96,506,515)	(\$36,397,976)	-1,653
49	(\$263,374,225)	(\$141,386,183)	(\$93,100,403)	(\$35,113,342)	-1,595
50	(\$261,768,284)	(\$140,524,072)	(\$92,532,718)	(\$34,899,236)	-1,585
51	(\$273,009,867)	(\$146,558,848)	(\$96,506,515)	(\$36,397,976)	-1,653
52	(\$164,477,081)	(\$88,110,430)	(\$58,602,358)	(\$26,722,341)	-1,046
53	(\$534,522,697)	(\$271,984,257)	(\$178,177,234)	(\$82,894,306)	-3,246
54	(\$337,770,529)	(\$182,549,056)	(\$123,247,400)	(\$52,370,532)	-2,224
55	(\$292,501,701)	(\$159,392,166)	(\$107,818,723)	(\$45,032,032)	-1,935
56	(\$483,036,646)	(\$243,458,775)	(\$158,811,167)	(\$62,762,540)	-2,816
57	(\$495,571,615)	(\$258,281,093)	(\$172,840,865)	(\$75,609,876)	-3,100
58	(\$411,474,431)	(\$212,852,630)	(\$143,596,836)	(\$60,046,511)	-2,578
59	(\$340,042,033)	(\$182,194,678)	(\$123,158,818)	(\$55,340,670)	-2,249
60	(\$549,530,329)	(\$282,741,790)	(\$188,097,903)	(\$88,704,079)	-3,437
61	(\$380,257,197)	(\$184,495,236)	(\$118,394,272)	(\$58,603,576)	-2,146
62	(\$487,437,656)	(\$262,723,795)	(\$177,366,809)	(\$74,942,572)	-3,194
63	(\$255,881,106)	(\$128,296,500)	(\$83,776,798)	(\$32,677,570)	-1,452
64	(\$255,881,106)	(\$128,296,500)	(\$83,776,798)	(\$32,677,570)	-1,452
65	(\$255,881,106)	(\$128,296,500)	(\$83,776,798)	(\$32,677,570)	-1,452
66	(\$254,766,686)	(\$132,735,321)	(\$87,564,744)	(\$35,918,016)	-1,519
67	(\$254,766,686)	(\$132,735,321)	(\$87,564,744)	(\$35,918,016)	-1,519
68	(\$463,683,814)	(\$235,542,234)	(\$156,134,236)	(\$74,178,461)	-2,819
69	(\$409,684,420)	(\$222,299,931)	(\$149,658,388)	(\$65,142,019)	-2,679
70	(\$254,766,686)	(\$132,735,321)	(\$87,564,744)	(\$35,918,016)	-1,519
71	(\$450,780,631)	(\$230,571,933)	(\$152,002,990)	(\$60,997,840)	-2,671
72	(\$448,901,479)	(\$224,051,304)	(\$146,315,246)	(\$63,561,482)	-2,628
73	(\$475,911,086)	(\$240,884,290)	(\$158,553,450)	(\$69,496,099)	-2,881
74	(\$281,050,554)	(\$149,289,319)	(\$99,463,060)	(\$47,523,035)	-1,832
75	(\$353,432,329)	(\$177,699,044)	(\$115,102,493)	(\$43,192,006)	-1,998
76	(\$353,432,329)	(\$177,699,044)	(\$115,102,493)	(\$43,192,006)	-1,998
77	(\$353,432,329)	(\$177,699,044)	(\$115,102,493)	(\$43,192,006)	-1,998
78	(\$353,432,329)	(\$177,699,044)	(\$115,102,493)	(\$43,192,006)	-1,998
79	(\$353,432,329)	(\$177,699,044)	(\$115,102,493)	(\$43,192,006)	-1,998
80	(\$247,351,940)	(\$130,721,155)	(\$88,187,434)	(\$40,503,142)	-1,615
81	(\$356,793,711)	(\$182,087,523)	(\$122,158,097)	(\$54,649,036)	-2,167
82	(\$302,096,381)	(\$152,580,313)	(\$99,272,196)	(\$44,463,013)	-1,729
83	(\$390,781,272)	(\$204,141,401)	(\$133,603,135)	(\$58,038,203)	-2,367
84	(\$413,324,589)	(\$219,532,154)	(\$145,494,187)	(\$56,713,138)	-2,549
85	(\$315,214,865)	(\$157,268,014)	(\$103,501,926)	(\$46,881,548)	-1,838
86	(\$326,478,834)	(\$169,309,199)	(\$110,493,141)	(\$48,410,750)	-1,970
87	(\$419,526,419)	(\$212,126,932)	(\$139,832,748)	(\$60,491,157)	-2,465
88	(\$295,218,115)	(\$148,135,784)	(\$98,094,802)	(\$48,881,023)	-1,791
89	(\$254,766,686)	(\$132,735,321)	(\$87,564,744)	(\$35,918,016)	-1,519
90	(\$373,522,376)	(\$188,268,926)	(\$123,765,921)	(\$46,308,798)	-2,136

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91	(\$373,522,376)	(\$188,268,926)	(\$123,765,921)	(\$46,308,798)	-2,136
92	(\$373,522,376)	(\$188,268,926)	(\$123,765,921)	(\$46,308,798)	-2,136
93	(\$373,522,376)	(\$188,268,926)	(\$123,765,921)	(\$46,308,798)	-2,136
94	(\$373,522,376)	(\$188,268,926)	(\$123,765,921)	(\$46,308,798)	-2,136
95	(\$373,522,376)	(\$188,268,926)	(\$123,765,921)	(\$46,308,798)	-2,136
96	(\$373,522,376)	(\$188,268,926)	(\$123,765,921)	(\$46,308,798)	-2,136
97	(\$373,522,376)	(\$188,268,926)	(\$123,765,921)	(\$46,308,798)	-2,136
98	(\$373,522,376)	(\$188,268,926)	(\$123,765,921)	(\$46,308,798)	-2,136
99	(\$373,522,376)	(\$188,268,926)	(\$123,765,921)	(\$46,308,798)	-2,136
100	(\$373,506,730)	(\$183,249,529)	(\$117,195,580)	(\$38,190,695)	-1,930
101	(\$369,417,734)	(\$186,200,037)	(\$122,405,855)	(\$45,799,910)	-2,113
102	(\$373,506,730)	(\$183,249,529)	(\$117,195,580)	(\$38,190,695)	-1,930
103	(\$373,506,730)	(\$183,249,529)	(\$117,195,580)	(\$38,190,695)	-1,930
104	(\$373,506,730)	(\$183,249,529)	(\$117,195,580)	(\$38,190,695)	-1,930
105	(\$373,506,730)	(\$183,249,529)	(\$117,195,580)	(\$38,190,695)	-1,930
106	(\$255,881,106)	(\$128,296,500)	(\$83,776,798)	(\$32,677,570)	-1,452
107	(\$373,506,730)	(\$183,249,529)	(\$117,195,580)	(\$38,190,695)	-1,930
108	(\$373,506,730)	(\$183,249,529)	(\$117,195,580)	(\$38,190,695)	-1,930
109	(\$373,506,730)	(\$183,249,529)	(\$117,195,580)	(\$38,190,695)	-1,930
110	(\$373,506,730)	(\$183,249,529)	(\$117,195,580)	(\$38,190,695)	-1,930
111	(\$381,397,718)	(\$187,120,997)	(\$119,671,543)	(\$38,997,541)	-1,971
112	(\$373,506,730)	(\$183,249,529)	(\$117,195,580)	(\$38,190,695)	-1,930
113	(\$381,397,718)	(\$187,120,997)	(\$119,671,543)	(\$38,997,541)	-1,971
114	(\$381,397,718)	(\$187,120,997)	(\$119,671,543)	(\$38,997,541)	-1,971
115	(\$381,397,718)	(\$187,120,997)	(\$119,671,543)	(\$38,997,541)	-1,971
116	(\$397,207,603)	(\$205,848,366)	(\$136,031,861)	(\$50,897,791)	-2,356
117	(\$397,207,603)	(\$205,848,366)	(\$136,031,861)	(\$50,897,791)	-2,356
118	(\$397,207,603)	(\$205,848,366)	(\$136,031,861)	(\$50,897,791)	-2,356
119	(\$397,207,603)	(\$205,848,366)	(\$136,031,861)	(\$50,897,791)	-2,356
120	(\$397,207,603)	(\$205,848,366)	(\$136,031,861)	(\$50,897,791)	-2,356
121	(\$397,207,603)	(\$205,848,366)	(\$136,031,861)	(\$50,897,791)	-2,356
122	(\$397,207,603)	(\$205,848,366)	(\$136,031,861)	(\$50,897,791)	-2,356
123	(\$397,207,603)	(\$205,848,366)	(\$136,031,861)	(\$50,897,791)	-2,356
124	(\$397,207,603)	(\$205,848,366)	(\$136,031,861)	(\$50,897,791)	-2,356
125	(\$397,207,603)	(\$205,848,366)	(\$136,031,861)	(\$50,897,791)	-2,356
126	(\$375,699,484)	(\$175,218,789)	(\$114,162,568)	(\$34,124,328)	-1,851
127	(\$375,699,484)	(\$175,218,789)	(\$114,162,568)	(\$34,124,328)	-1,851
128	(\$375,699,484)	(\$175,218,789)	(\$114,162,568)	(\$34,124,328)	-1,851
129	(\$375,699,484)	(\$175,218,789)	(\$114,162,568)	(\$34,124,328)	-1,851
130	(\$375,699,484)	(\$175,218,789)	(\$114,162,568)	(\$34,124,328)	-1,851
131	(\$375,699,484)	(\$175,218,789)	(\$114,162,568)	(\$34,124,328)	-1,851
132	(\$375,699,484)	(\$175,218,789)	(\$114,162,568)	(\$34,124,328)	-1,851
133	(\$375,699,484)	(\$175,218,789)	(\$114,162,568)	(\$34,124,328)	-1,851
134	(\$375,699,484)	(\$175,218,789)	(\$114,162,568)	(\$34,124,328)	-1,851
135	(\$375,699,484)	(\$175,218,789)	(\$114,162,568)	(\$34,124,328)	-1,851

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136	(\$164,477,081)	(\$88,110,430)	(\$58,602,358)	(\$26,722,341)	-1,046
137	(\$366,754,258)	(\$171,046,913)	(\$111,444,412)	(\$33,311,844)	-1,807
138	(\$366,754,258)	(\$171,046,913)	(\$111,444,412)	(\$33,311,844)	-1,807
139	(\$366,754,258)	(\$171,046,913)	(\$111,444,412)	(\$33,311,844)	-1,807
140	(\$366,754,258)	(\$171,046,913)	(\$111,444,412)	(\$33,311,844)	-1,807
141	(\$375,699,484)	(\$175,218,789)	(\$114,162,568)	(\$34,124,328)	-1,851
142	(\$375,699,484)	(\$175,218,789)	(\$114,162,568)	(\$34,124,328)	-1,851
143	(\$375,699,484)	(\$175,218,789)	(\$114,162,568)	(\$34,124,328)	-1,851
144	(\$375,699,484)	(\$175,218,789)	(\$114,162,568)	(\$34,124,328)	-1,851
145	(\$375,699,484)	(\$175,218,789)	(\$114,162,568)	(\$34,124,328)	-1,851
146	(\$375,699,484)	(\$175,218,789)	(\$114,162,568)	(\$34,124,328)	-1,851
147	(\$366,754,258)	(\$171,046,913)	(\$111,444,412)	(\$33,311,844)	-1,807
148	(\$366,754,258)	(\$171,046,913)	(\$111,444,412)	(\$33,311,844)	-1,807
149	(\$366,754,258)	(\$171,046,913)	(\$111,444,412)	(\$33,311,844)	-1,807
150	(\$366,754,258)	(\$171,046,913)	(\$111,444,412)	(\$33,311,844)	-1,807
TOTAL	(\$54,630,683,854)	(\$27,469,669,460)	(\$18,092,577,846)	(\$7,082,534,085)	-314,121

NOTE: In cases in which a county was part of more than one district, allocations are based on the percentage of the population residing in a district. This convention is adopted because of a lack of subcounty data sufficient for allocation purposes. In some instances, this approach will result in districts which reflect the same proportion of a large urban county reporting identical results. Allocations reflect district maps as currently defined.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

**The Total Annual Impact of Direct Medical Expenses and Related Outlays
Associated with Cancer Treatment on Business Activity in Texas:
Results by Texas Senate District**

Senate District	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
1	(\$3,435,435,017)	(\$1,784,743,998)	(\$1,184,410,771)	(\$478,448,251)	-20,843
2	(\$3,032,033,462)	(\$1,557,704,238)	(\$1,032,200,294)	(\$411,442,461)	-18,075
3	(\$1,897,532,684)	(\$975,592,392)	(\$649,234,409)	(\$280,096,414)	-11,722
4	(\$1,208,139,775)	(\$628,945,362)	(\$414,986,946)	(\$171,192,040)	-7,206
5	(\$674,672,366)	(\$346,132,165)	(\$229,718,516)	(\$102,970,514)	-4,185
6	(\$14,539,833)	(\$8,048,180)	(\$5,520,102)	(\$1,696,327)	-95
7	(\$3,905,100)	(\$2,219,936)	(\$1,488,146)	(\$990,229)	-30
8	(\$483,469,509)	(\$237,374,439)	(\$151,747,485)	(\$49,880,116)	-2,504
9	(\$2,077,959,979)	(\$1,019,486,814)	(\$652,003,580)	(\$212,469,361)	-10,738
10	(\$894,311,890)	(\$438,766,477)	(\$280,609,136)	(\$91,442,510)	-4,621
11	(\$1,866,965,452)	(\$915,423,535)	(\$585,058,184)	(\$193,578,790)	-9,660
12	(\$188,100,065)	(\$94,698,140)	(\$62,129,742)	(\$23,642,235)	-1,073
13	(\$916,255,728)	(\$461,225,239)	(\$302,003,404)	(\$118,571,868)	-5,250
14	(\$22,950,474)	(\$12,075,917)	(\$8,216,841)	(\$4,188,171)	-151
15	(\$13,058,180)	(\$7,434,547)	(\$5,159,490)	(\$2,610,605)	-98
16	(\$23,833,125)	(\$12,126,657)	(\$8,269,851)	(\$3,175,899)	-147
17	(\$357,998,617)	(\$182,769,580)	(\$123,071,937)	(\$54,565,500)	-2,195
18	(\$4,444,931,592)	(\$2,206,558,924)	(\$1,439,243,592)	(\$588,528,990)	-25,215
19	(\$5,585,099,601)	(\$2,684,556,312)	(\$1,762,687,544)	(\$604,557,296)	-29,519
20	(\$4,472,612,902)	(\$2,085,937,959)	(\$1,359,078,196)	(\$406,241,997)	-22,041
21	(\$2,906,319,863)	(\$1,498,906,515)	(\$1,000,416,941)	(\$416,941,296)	-17,858
22	(\$1,391,299,049)	(\$721,625,731)	(\$489,140,404)	(\$214,854,932)	-8,736
23	(\$57,850,593)	(\$29,906,373)	(\$20,128,585)	(\$8,070,940)	-358
24	(\$1,026,266,798)	(\$526,300,740)	(\$350,611,834)	(\$158,089,436)	-6,372
25	(\$465,091,894)	(\$240,294,522)	(\$161,015,529)	(\$74,105,259)	-2,895
26	(\$1,158,763)	(\$381,978)	(\$241,139)	(\$126,461)	-4
27	(\$774,439,743)	(\$410,019,583)	(\$271,969,558)	(\$107,890,278)	-4,785
28	(\$6,114,498,487)	(\$3,059,633,692)	(\$2,024,930,403)	(\$869,994,745)	-35,924
29	(\$122,687,170)	(\$65,672,474)	(\$44,100,346)	(\$21,971,130)	-814
30	(\$4,979,377,122)	(\$2,516,502,203)	(\$1,654,222,616)	(\$633,024,091)	-28,712
31	(\$5,177,889,026)	(\$2,738,604,837)	(\$1,818,962,325)	(\$777,175,944)	-32,294
TOTAL	(\$54,630,683,854)	(\$27,469,669,460)	(\$18,092,577,846)	(\$7,082,534,085)	-314,121

NOTE: In cases in which a county was part of more than one district, allocations are based on the percentage of the population residing in a district. This convention is adopted because of a lack of subcounty data sufficient for allocation purposes. In some instances, this approach will result in districts which reflect the same proportion of a large urban county reporting identical results. Allocations reflect district maps as currently defined.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group



**The Total Annual Impact of Direct Medical Expenses and Related Outlays
Associated with Cancer Treatment on Business Activity in Texas:
Results by US Congressional District in Texas**

US Congressional District in Texas	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
1	(\$2,032,392,222)	(\$1,044,280,146)	(\$698,622,224)	(\$292,658,534)	-12,427
2	(\$1,520,688,387)	(\$709,218,906)	(\$462,086,586)	(\$138,122,279)	-7,494
3	(\$1,030,647,047)	(\$536,974,709)	(\$354,239,191)	(\$145,304,702)	-6,143
4	(\$1,803,779,456)	(\$946,923,942)	(\$636,134,274)	(\$284,384,186)	-11,486
5	(\$1,794,219,507)	(\$918,079,924)	(\$605,419,183)	(\$237,174,158)	-10,578
6	(\$1,568,092,286)	(\$784,980,077)	(\$515,549,174)	(\$203,634,543)	-9,007
7	(\$1,520,688,387)	(\$709,218,906)	(\$462,086,586)	(\$138,122,279)	-7,494
8	(\$1,759,509,162)	(\$880,638,445)	(\$586,018,683)	(\$229,617,525)	-10,186
9	(\$1,486,152,896)	(\$694,753,701)	(\$451,702,418)	(\$144,292,047)	-7,396
10	(\$1,474,688,667)	(\$733,521,424)	(\$480,380,574)	(\$181,686,867)	-8,229
11	(\$1,820,154,825)	(\$930,155,167)	(\$615,362,844)	(\$276,933,571)	-11,042
12	(\$1,585,128,636)	(\$791,548,699)	(\$517,589,009)	(\$204,717,325)	-9,016
13	(\$1,691,133,049)	(\$871,797,984)	(\$577,226,990)	(\$260,099,153)	-10,321
14	(\$1,862,099,090)	(\$939,053,555)	(\$630,321,361)	(\$266,426,069)	-11,122
15	(\$1,056,745,798)	(\$554,883,917)	(\$370,910,150)	(\$163,915,336)	-6,751
16	(\$1,537,430,631)	(\$772,990,843)	(\$500,695,847)	(\$187,885,225)	-8,693
17	(\$1,551,815,717)	(\$798,501,743)	(\$526,631,954)	(\$221,052,510)	-9,376
18	(\$1,520,688,387)	(\$709,218,906)	(\$462,086,586)	(\$138,122,279)	-7,494
19	(\$1,628,662,446)	(\$845,121,356)	(\$557,835,426)	(\$236,859,625)	-9,891
20	(\$1,628,551,172)	(\$843,978,300)	(\$557,730,628)	(\$208,680,943)	-9,661
21	(\$1,618,615,981)	(\$838,425,935)	(\$552,622,331)	(\$225,007,626)	-9,755
22	(\$1,165,791,796)	(\$554,166,661)	(\$359,727,856)	(\$152,444,332)	-6,218
23	(\$1,454,162,019)	(\$752,025,801)	(\$496,616,735)	(\$206,988,636)	-8,824
24	(\$1,490,401,764)	(\$740,804,199)	(\$480,117,850)	(\$169,308,546)	-8,107
25	(\$1,425,472,764)	(\$745,852,358)	(\$496,764,153)	(\$208,413,668)	-8,870
26	(\$1,183,157,250)	(\$594,036,502)	(\$388,594,817)	(\$149,738,461)	-6,726
27	(\$1,865,703,559)	(\$916,480,982)	(\$608,539,514)	(\$265,953,612)	-10,781
28	(\$1,099,343,212)	(\$576,459,358)	(\$386,166,613)	(\$163,702,725)	-6,917
29	(\$1,520,688,387)	(\$709,218,906)	(\$462,086,586)	(\$138,122,279)	-7,494
30	(\$1,546,633,503)	(\$758,807,907)	(\$485,288,741)	(\$158,141,752)	-7,992
31	(\$922,364,016)	(\$498,730,003)	(\$334,798,347)	(\$145,592,879)	-5,993
32	(\$1,510,902,163)	(\$743,388,863)	(\$476,157,195)	(\$157,179,632)	-7,862
33	(\$1,568,980,610)	(\$780,235,858)	(\$506,008,658)	(\$177,373,266)	-8,538
34	(\$1,270,197,197)	(\$666,617,713)	(\$445,052,754)	(\$190,602,448)	-8,073
35	(\$1,385,118,555)	(\$723,328,525)	(\$477,745,364)	(\$186,149,113)	-8,334
36	(\$1,729,883,308)	(\$855,249,239)	(\$567,660,643)	(\$228,125,954)	-9,831
TOTAL	(\$54,630,683,854)	(\$27,469,669,460)	(\$18,092,577,846)	(\$7,082,534,085)	-314,121

NOTE: In cases in which a county is part of more than one district, allocations are based on the percentage of the population residing in a district. This convention is adopted because of a lack of subcounty data sufficient for allocation purposes. In some instances, this approach will result in districts which reflect the same proportion of a large urban county reporting identical results. Allocations reflect district maps as currently defined.
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

Total Annual Impact of Morbidity Losses Associated with the Incidence of Cancer

**The Total Annual Impact of Morbidity Losses Associated with
the Incidence of Cancer on Business Activity in Texas:
Results by Detailed Industrial Category**

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$521,373,074)	(\$155,219,715)	(\$93,863,953)	(1,676)
Mining	(\$3,740,921,251)	(\$1,797,821,275)	(\$614,817,310)	(2,428)
Construction	(\$1,496,920,864)	(\$729,648,928)	(\$550,186,643)	(8,318)
Nondurable Manufacturing	(\$4,957,906,921)	(\$1,370,537,750)	(\$722,859,848)	(7,411)
Durable Manufacturing	(\$2,385,220,108)	(\$992,157,202)	(\$667,910,865)	(6,385)
Transportation and Utilities	(\$3,772,344,264)	(\$1,311,090,846)	(\$732,375,836)	(7,494)
Information	(\$1,052,871,094)	(\$701,367,741)	(\$309,227,106)	(2,746)
Wholesale Trade	(\$1,440,767,806)	(\$1,123,913,589)	(\$630,996,332)	(7,167)
Retail Trade (including Restaurants)	(\$5,909,074,190)	(\$4,573,908,800)	(\$2,636,877,549)	(80,928)
FIRE	(\$8,433,545,548)	(\$2,506,606,981)	(\$892,998,069)	(8,301)
Business Services	(\$2,580,375,346)	(\$1,871,957,472)	(\$1,515,594,024)	(17,335)
Health Services	(\$1,671,307,565)	(\$1,343,713,521)	(\$1,074,454,153)	(18,438)
Other Services	(\$2,678,170,595)	(\$1,414,420,260)	(\$1,079,544,185)	(24,651)
TOTAL	(\$40,640,798,625)	(\$19,892,364,078)	(\$11,521,705,873)	(193,278)
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				

**The Total Annual Impact of Morbidity Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
Comptroller's Economic Region Results**

Economic Region	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
High Plains	(\$1,356,083,086)	(\$692,736,364)	(\$401,270,524)	(\$228,531,597)	-7,005
Northwest Texas	(\$1,146,858,070)	(\$590,141,716)	(\$335,665,244)	(\$197,927,961)	-5,852
Metroplex	(\$10,532,151,920)	(\$5,179,016,280)	(\$2,997,592,890)	(\$1,458,002,918)	-49,460
Upper East Texas	(\$2,383,331,422)	(\$1,197,459,301)	(\$692,990,209)	(\$404,577,503)	-12,168
Southeast Texas	(\$1,582,934,594)	(\$795,487,599)	(\$481,329,599)	(\$291,695,275)	-8,600
Gulf Coast	(\$10,623,247,138)	(\$4,907,245,988)	(\$2,780,575,804)	(\$1,174,822,698)	-42,662
Capital	(\$2,122,021,522)	(\$1,093,069,830)	(\$651,998,896)	(\$348,986,503)	-11,331
Central Texas	(\$1,732,673,676)	(\$873,756,353)	(\$517,867,382)	(\$312,407,698)	-9,469
Alamo	(\$4,103,485,093)	(\$2,041,262,154)	(\$1,203,955,459)	(\$657,879,267)	-21,048
South Texas	(\$2,830,607,906)	(\$1,429,555,650)	(\$832,148,799)	(\$491,024,212)	-14,889
West Texas	(\$982,581,988)	(\$488,643,702)	(\$273,003,446)	(\$155,281,807)	-4,617
Upper Rio Grande	(\$1,244,822,209)	(\$603,989,141)	(\$353,307,624)	(\$187,936,750)	-6,176
TOTAL STATE IMPACT	(\$40,640,798,625)	(\$19,892,364,078)	(\$11,521,705,873)	(\$5,909,074,190)	-193,278
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group					

**The Total Annual Impact of Morbidity Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
Council of Governments (COG) Region Results**

COG	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Panhandle	(\$715,271,914)	(\$360,898,676)	(\$205,401,101)	(\$117,320,097)	-3,538
South Plains	(\$640,811,172)	(\$331,837,689)	(\$195,869,423)	(\$111,211,500)	-3,467
Nortex	(\$470,128,383)	(\$246,330,951)	(\$140,090,422)	(\$82,125,965)	-2,429
North Central Texas	(\$10,134,019,824)	(\$4,975,385,183)	(\$2,874,645,056)	(\$1,382,307,612)	-47,226
Ark-Tex	(\$516,110,748)	(\$260,965,019)	(\$156,969,539)	(\$100,461,990)	-2,902
East Texas	(\$1,867,220,674)	(\$936,494,282)	(\$536,020,670)	(\$304,115,512)	-9,267
West Central Texas	(\$676,729,687)	(\$343,810,765)	(\$195,574,822)	(\$115,801,996)	-3,423
Rio Grande	(\$1,244,822,209)	(\$603,989,141)	(\$353,307,624)	(\$187,936,750)	-6,176
Permian Basin	(\$677,657,338)	(\$338,849,166)	(\$189,642,094)	(\$105,774,448)	-3,138
Concho Valley	(\$304,924,651)	(\$149,794,536)	(\$83,361,351)	(\$49,507,359)	-1,479
Heart of Texas	(\$709,744,293)	(\$342,910,169)	(\$201,199,881)	(\$119,344,505)	-3,661
Capital Area	(\$2,122,021,522)	(\$1,093,069,830)	(\$651,998,896)	(\$348,986,503)	-11,331
Brazos Valley	(\$441,553,416)	(\$225,694,930)	(\$130,941,429)	(\$78,572,133)	-2,348
Deep East Texas	(\$788,021,571)	(\$403,517,832)	(\$241,379,403)	(\$151,788,756)	-4,416
South East Texas	(\$794,913,024)	(\$391,969,767)	(\$239,950,196)	(\$139,906,519)	-4,185
Houston-Galveston Area	(\$10,623,247,138)	(\$4,907,245,988)	(\$2,780,575,804)	(\$1,174,822,698)	-42,662
Golden Crescent	(\$385,546,279)	(\$191,308,938)	(\$110,591,661)	(\$63,898,624)	-1,897
Alamo Area	(\$3,718,955,048)	(\$1,850,442,801)	(\$1,093,615,089)	(\$594,086,204)	-19,154
South Texas	(\$283,776,381)	(\$150,170,454)	(\$84,226,636)	(\$54,446,273)	-1,521
Coastal Bend	(\$1,145,786,509)	(\$544,861,970)	(\$309,631,169)	(\$173,817,287)	-5,247
Lower Rio Grande Valley	(\$1,199,377,969)	(\$628,445,993)	(\$375,929,439)	(\$222,324,617)	-6,948
Texoma	(\$398,132,096)	(\$203,631,097)	(\$122,947,833)	(\$75,695,306)	-2,234
Central Texas	(\$581,375,967)	(\$305,151,254)	(\$185,726,073)	(\$114,491,060)	-3,460
Middle Rio Grande	(\$200,650,815)	(\$105,587,648)	(\$62,110,263)	(\$40,330,474)	-1,169
Border Region	(\$2,930,422,122)	(\$1,489,255,609)	(\$876,205,249)	(\$505,370,015)	-15,826
TOTAL STATE IMPACT	(\$40,640,798,625)	(\$19,892,364,078)	(\$11,521,705,873)	(\$5,909,074,190)	-193,278
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group					

**The Total Annual Impact of Morbidity Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
Metropolitan Statistical Area (MSA) and Rural Texas Results**

MSA	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Abilene	(\$331,696,178)	(\$165,040,457)	(\$93,270,120)	(\$50,010,115)	-1,577
Amarillo	(\$457,861,889)	(\$237,463,562)	(\$135,928,513)	(\$74,514,857)	-2,343
Austin-Round Rock	(\$1,825,611,317)	(\$947,449,978)	(\$568,763,908)	(\$299,502,422)	-9,843
Beaumont-Port Arthur	(\$808,078,178)	(\$400,173,997)	(\$245,262,019)	(\$143,526,161)	-4,283
Brownsville- Harlingen	(\$481,809,743)	(\$244,102,949)	(\$145,544,276)	(\$86,813,643)	-2,710
College Station- Bryan	(\$285,429,520)	(\$144,788,441)	(\$83,830,787)	(\$48,588,605)	-1,492
Corpus Christi	(\$909,005,379)	(\$422,305,580)	(\$241,337,648)	(\$130,417,719)	-4,033
Dallas-Plano-Irving MD*	(\$6,229,815,184)	(\$3,052,067,641)	(\$1,753,925,794)	(\$802,403,712)	-28,288
Fort Worth- Arlington MD*	(\$3,684,612,355)	(\$1,813,975,725)	(\$1,055,923,717)	(\$540,782,011)	-17,756
El Paso	(\$1,209,453,955)	(\$585,559,608)	(\$342,378,863)	(\$180,814,700)	-5,973
Houston-The Woodlands-Sugar Land	(\$10,255,561,512)	(\$4,722,106,798)	(\$2,671,758,792)	(\$1,104,792,453)	-40,664
Killeen-Temple	(\$499,635,942)	(\$262,986,878)	(\$160,324,914)	(\$97,627,799)	-2,984
Laredo	(\$218,786,817)	(\$114,672,091)	(\$63,550,634)	(\$39,276,415)	-1,123
Longview	(\$467,633,234)	(\$240,302,189)	(\$138,882,866)	(\$75,979,181)	-2,351
Lubbock	(\$485,670,646)	(\$252,775,540)	(\$150,663,706)	(\$81,069,162)	-2,645
McAllen-Edinburg- Mission	(\$693,312,428)	(\$370,637,845)	(\$222,440,002)	(\$129,995,170)	-4,088
Midland	(\$210,999,685)	(\$106,881,544)	(\$59,329,426)	(\$31,343,974)	-961
Odessa	(\$240,046,593)	(\$118,721,473)	(\$67,947,328)	(\$36,723,072)	-1,114
San Angelo	(\$215,662,760)	(\$105,023,272)	(\$58,008,722)	(\$33,586,814)	-1,031
San Antonio-New Braunfels	(\$3,461,715,729)	(\$1,724,848,118)	(\$1,021,491,829)	(\$549,869,806)	-17,846
Sherman-Denison	(\$234,362,056)	(\$121,769,556)	(\$74,239,219)	(\$47,537,228)	-1,386
Texarkana	(\$166,746,806)	(\$87,845,760)	(\$53,279,370)	(\$32,442,469)	-976
Tyler	(\$492,014,094)	(\$242,078,457)	(\$133,688,163)	(\$72,713,970)	-2,252
Victoria	(\$209,205,230)	(\$102,789,795)	(\$58,756,734)	(\$32,292,272)	-971
Waco	(\$505,542,135)	(\$243,271,609)	(\$143,531,491)	(\$81,363,837)	-2,586
Wichita Falls	(\$293,613,871)	(\$157,379,697)	(\$89,575,111)	(\$50,583,080)	-1,535
Rural Area	(\$5,766,915,393)	(\$2,905,345,520)	(\$1,688,071,923)	(\$1,054,503,542)	-30,466
TOTAL STATE IMPACT	(\$40,640,798,625)	(\$19,892,364,078)	(\$11,521,705,873)	(\$5,909,074,190)	-193,278
*Metropolitan Division SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group					

**The Total Annual Impact of Morbidity Losses Associated with the Incidence
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MSA	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Anderson	(\$93,660,345)	(\$50,942,249)	(\$29,505,131)	(\$17,030,225)	-517
Andrews	(\$22,768,218)	(\$11,805,350)	(\$6,506,614)	(\$3,517,138)	-106
Angelina	(\$167,277,151)	(\$83,652,635)	(\$50,830,839)	(\$31,315,994)	-928
Aransas	(\$87,055,702)	(\$40,217,152)	(\$21,922,433)	(\$12,992,007)	-372
Archer	(\$14,185,488)	(\$7,330,582)	(\$3,930,167)	(\$2,457,086)	-70
Armstrong	(\$4,767,255)	(\$2,409,045)	(\$1,358,922)	(\$571,923)	-22
Atascosa	(\$80,233,533)	(\$38,761,948)	(\$21,866,838)	(\$11,940,631)	-362
Austin	(\$56,654,443)	(\$26,913,624)	(\$16,154,644)	(\$7,572,761)	-257
Bailey	(\$7,054,555)	(\$3,636,696)	(\$2,183,986)	(\$1,505,692)	-41
Bandera	(\$50,532,669)	(\$24,017,512)	(\$13,544,376)	(\$8,936,699)	-250
Bastrop	(\$121,889,820)	(\$59,913,966)	(\$35,389,847)	(\$22,003,804)	-653
Baylor	(\$11,625,676)	(\$6,187,732)	(\$3,601,175)	(\$2,177,851)	-64
Bee	(\$39,785,332)	(\$21,111,008)	(\$11,883,250)	(\$7,509,831)	-215
Bell	(\$370,530,608)	(\$197,841,437)	(\$121,763,014)	(\$72,244,572)	-2,244
Bexar	(\$2,752,327,002)	(\$1,381,037,850)	(\$822,557,183)	(\$424,605,829)	-14,193
Blanco	(\$18,699,835)	(\$8,866,224)	(\$5,072,102)	(\$3,278,515)	-96
Borden	(\$6,792,848)	(\$3,379,212)	(\$1,797,322)	(\$857,335)	-27
Bosque	(\$39,746,683)	(\$19,595,610)	(\$11,866,474)	(\$6,664,673)	-213
Bowie	(\$166,746,806)	(\$87,845,760)	(\$53,279,370)	(\$32,442,469)	-976
Brazoria	(\$440,888,024)	(\$210,208,565)	(\$123,668,489)	(\$73,085,792)	-2,130
Brazos	(\$211,751,611)	(\$107,011,565)	(\$61,721,411)	(\$33,719,140)	-1,086
Brewster	(\$15,413,002)	(\$8,460,658)	(\$5,142,719)	(\$3,079,031)	-95
Briscoe	(\$3,451,920)	(\$1,624,819)	(\$934,077)	(\$593,188)	-17
Brooks	(\$10,599,562)	(\$5,783,906)	(\$3,349,837)	(\$2,252,949)	-61
Brown	(\$69,657,573)	(\$37,781,116)	(\$22,986,482)	(\$16,146,136)	-448
Burleson	(\$39,466,216)	(\$20,945,611)	(\$11,969,133)	(\$7,509,831)	-210
Burnet	(\$94,174,149)	(\$45,085,585)	(\$26,065,189)	(\$15,470,251)	-464
Caldwell	(\$69,138,889)	(\$34,748,716)	(\$19,909,405)	(\$11,565,139)	-348
Calhoun	(\$28,706,951)	(\$11,790,526)	(\$6,777,828)	(\$3,763,827)	-111
Callahan	(\$34,435,193)	(\$16,704,100)	(\$9,149,745)	(\$5,632,373)	-161
Cameron	(\$481,809,743)	(\$244,102,949)	(\$145,544,276)	(\$86,813,643)	-2,710
Camp	(\$20,482,251)	(\$10,044,185)	(\$5,971,202)	(\$3,690,412)	-110
Carson	(\$5,993,201)	(\$2,528,003)	(\$1,179,400)	(\$470,144)	-18
Cass	(\$58,929,664)	(\$29,822,115)	(\$17,796,469)	(\$12,485,993)	-335
Castro	(\$5,978,128)	(\$2,899,855)	(\$1,722,217)	(\$1,237,330)	-33
Chambers	(\$58,446,301)	(\$25,164,890)	(\$13,610,347)	(\$6,218,052)	-209
Cherokee	(\$86,941,025)	(\$43,689,817)	(\$26,919,835)	(\$17,008,731)	-491
Childress	(\$12,794,455)	(\$6,402,563)	(\$3,686,675)	(\$2,553,342)	-70
Clay	(\$22,953,148)	(\$11,698,123)	(\$7,008,203)	(\$3,592,698)	-117
Cochran	(\$3,450,377)	(\$1,848,622)	(\$962,417)	(\$453,897)	-15
Coke	(\$10,960,882)	(\$5,305,849)	(\$2,962,925)	(\$1,736,637)	-49
Coleman	(\$25,376,375)	(\$13,128,889)	(\$7,306,319)	(\$4,430,800)	-128
Collin	(\$832,748,787)	(\$428,198,229)	(\$253,609,620)	(\$136,271,875)	-4,353
Collingsworth	(\$5,807,500)	(\$3,196,970)	(\$1,919,338)	(\$1,228,093)	-34
Colorado	(\$50,164,554)	(\$25,538,430)	(\$14,726,498)	(\$9,980,615)	-286

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Comal	(\$196,132,233)	(\$94,991,900)	(\$55,323,838)	(\$34,770,516)	-1,046
Comanche	(\$29,402,695)	(\$14,961,905)	(\$9,015,456)	(\$5,621,372)	-165
Concho	(\$5,082,368)	(\$2,718,901)	(\$1,710,053)	(\$942,464)	-31
Cooke	(\$91,755,699)	(\$45,719,383)	(\$26,492,719)	(\$14,343,777)	-436
Coryell	(\$84,102,059)	(\$42,474,702)	(\$25,146,878)	(\$16,371,431)	-479
Cottle	(\$4,866,699)	(\$2,827,904)	(\$1,684,710)	(\$877,819)	-28
Crane	(\$3,925,928)	(\$2,135,587)	(\$1,161,476)	(\$595,128)	-19
Crockett	(\$5,627,463)	(\$2,907,668)	(\$1,588,719)	(\$1,201,573)	-29
Crosby	(\$10,019,297)	(\$5,421,048)	(\$3,043,452)	(\$1,418,907)	-50
Culberson	(\$2,813,986)	(\$1,675,525)	(\$984,098)	(\$826,081)	-20
Dallam	(\$7,259,656)	(\$3,896,332)	(\$2,321,278)	(\$1,224,548)	-41
Dallas	(\$4,059,967,290)	(\$1,979,371,154)	(\$1,117,344,525)	(\$448,098,666)	-17,213
Dawson	(\$25,052,502)	(\$12,672,848)	(\$6,897,682)	(\$4,336,521)	-120
Deaf Smith	(\$15,296,048)	(\$7,474,694)	(\$4,399,191)	(\$2,344,647)	-78
Delta	(\$9,348,305)	(\$4,889,187)	(\$2,956,637)	(\$1,194,946)	-48
Denton	(\$740,803,161)	(\$355,168,465)	(\$209,894,011)	(\$109,042,742)	-3,562
DeWitt	(\$46,198,296)	(\$23,202,329)	(\$13,844,794)	(\$8,411,010)	-250
Dickens	(\$5,531,466)	(\$2,920,410)	(\$1,759,159)	(\$1,094,378)	-31
Dimmit	(\$11,526,816)	(\$6,005,896)	(\$3,368,397)	(\$2,403,146)	-63
Donley	(\$8,368,094)	(\$4,727,383)	(\$2,858,792)	(\$2,177,851)	-57
Duval	(\$18,373,816)	(\$8,968,705)	(\$4,827,178)	(\$2,654,334)	-82
Eastland	(\$44,812,010)	(\$22,198,988)	(\$12,444,648)	(\$8,185,715)	-224
Ector	(\$240,046,593)	(\$118,721,473)	(\$67,947,328)	(\$36,723,072)	-1,114
Edwards	(\$3,522,016)	(\$1,737,474)	(\$930,328)	(\$616,069)	-17
El Paso	(\$1,207,391,016)	(\$584,484,514)	(\$341,770,783)	(\$180,160,839)	-5,959
Ellis	(\$207,406,079)	(\$96,031,023)	(\$56,975,135)	(\$34,868,399)	-1,007
Erath	(\$51,038,042)	(\$27,597,646)	(\$16,913,243)	(\$11,339,844)	-326
Falls	(\$33,521,625)	(\$17,764,814)	(\$10,865,868)	(\$6,565,923)	-201
Fannin	(\$72,014,341)	(\$36,142,158)	(\$22,215,895)	(\$13,814,301)	-411
Fayette	(\$75,840,238)	(\$38,737,346)	(\$21,768,191)	(\$11,715,336)	-371
Fisher	(\$7,691,128)	(\$3,987,995)	(\$2,333,629)	(\$1,644,615)	-45
Floyd	(\$8,530,468)	(\$3,841,751)	(\$2,218,948)	(\$1,175,044)	-39
Foard	(\$1,874,446)	(\$1,053,840)	(\$650,178)	(\$392,081)	-12
Fort Bend	(\$775,646,836)	(\$364,104,745)	(\$204,398,839)	(\$101,970,187)	-3,253
Franklin	(\$17,879,585)	(\$8,897,929)	(\$4,833,016)	(\$3,098,952)	-86
Freestone	(\$40,877,609)	(\$20,219,664)	(\$10,993,760)	(\$7,509,831)	-197
Frio	(\$25,303,305)	(\$12,260,892)	(\$6,664,045)	(\$4,008,341)	-115
Gaines	(\$16,511,346)	(\$7,988,702)	(\$4,191,675)	(\$2,472,509)	-70
Galveston	(\$619,724,526)	(\$289,204,379)	(\$169,001,789)	(\$96,801,718)	-2,947
Garza	(\$9,109,643)	(\$4,467,581)	(\$2,458,796)	(\$1,515,269)	-42
Gillespie	(\$67,178,429)	(\$32,900,213)	(\$19,542,338)	(\$12,015,729)	-362
Glasscock	(\$874,297)	(\$431,572)	(\$209,338)	(\$73,282)	-3
Goliad	(\$13,975,070)	(\$7,486,644)	(\$4,278,507)	(\$3,079,031)	-79
Gonzales	(\$25,909,142)	(\$13,219,378)	(\$7,907,657)	(\$5,035,463)	-146
Gray	(\$60,311,669)	(\$28,201,688)	(\$15,806,220)	(\$9,590,582)	-262

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Grayson	(\$234,362,056)	(\$121,769,556)	(\$74,239,219)	(\$47,537,228)	-1,386
Gregg	(\$276,832,428)	(\$146,093,047)	(\$84,794,853)	(\$44,833,689)	-1,419
Grimes	(\$35,852,194)	(\$18,050,464)	(\$10,661,102)	(\$6,438,687)	-190
Guadalupe	(\$174,035,224)	(\$86,119,410)	(\$50,935,074)	(\$33,268,550)	-938
Hale	(\$38,705,889)	(\$20,769,895)	(\$12,578,216)	(\$9,427,010)	-247
Hall	(\$7,624,929)	(\$3,850,430)	(\$2,221,974)	(\$1,444,346)	-41
Hamilton	(\$16,704,860)	(\$8,249,266)	(\$4,984,833)	(\$3,529,620)	-96
Hansford	(\$6,311,228)	(\$2,856,752)	(\$1,385,664)	(\$626,821)	-19
Hardeman	(\$7,686,258)	(\$4,224,109)	(\$2,491,363)	(\$2,027,654)	-50
Hardin	(\$107,165,226)	(\$52,623,160)	(\$29,980,436)	(\$19,074,970)	-531
Harris	(\$7,261,425,669)	(\$3,304,445,264)	(\$1,859,486,439)	(\$677,506,206)	-27,206
Harrison	(\$153,187,055)	(\$71,275,091)	(\$40,683,959)	(\$19,799,350)	-642
Hartley	(\$1,791,100)	(\$882,951)	(\$510,310)	(\$328,966)	-10
Haskell	(\$12,787,393)	(\$6,586,742)	(\$3,836,415)	(\$2,211,920)	-67
Hays	(\$172,080,540)	(\$87,045,213)	(\$51,661,943)	(\$30,640,109)	-935
Hemphill	(\$3,929,379)	(\$1,852,152)	(\$946,605)	(\$496,972)	-15
Henderson	(\$224,899,083)	(\$108,837,522)	(\$62,780,824)	(\$37,173,662)	-1,133
Hidalgo	(\$693,312,428)	(\$370,637,845)	(\$222,440,002)	(\$129,995,170)	-4,088
Hill	(\$77,756,642)	(\$36,152,953)	(\$20,849,707)	(\$14,719,268)	-413
Hockley	(\$31,085,233)	(\$15,993,198)	(\$8,895,419)	(\$5,611,490)	-159
Hood	(\$130,086,098)	(\$61,465,375)	(\$36,376,677)	(\$22,904,984)	-669
Hopkins	(\$61,523,989)	(\$32,256,582)	(\$19,609,451)	(\$13,292,400)	-370
Houston	(\$62,733,791)	(\$30,704,423)	(\$18,701,671)	(\$8,514,691)	-299
Howard	(\$74,188,092)	(\$35,679,067)	(\$20,074,164)	(\$11,490,041)	-336
Hudspeth	(\$2,062,939)	(\$1,075,094)	(\$608,080)	(\$653,861)	-14
Hunt	(\$144,638,815)	(\$72,604,661)	(\$43,795,695)	(\$29,814,028)	-826
Hutchinson	(\$48,316,375)	(\$22,672,320)	(\$12,620,226)	(\$8,682,196)	-212
Irion	(\$3,235,238)	(\$1,356,396)	(\$695,203)	(\$393,363)	-11
Jack	(\$16,375,899)	(\$8,218,551)	(\$4,646,302)	(\$2,766,399)	-78
Jackson	(\$26,392,513)	(\$13,657,843)	(\$7,386,852)	(\$4,828,801)	-130
Jasper	(\$71,782,393)	(\$36,567,463)	(\$21,919,041)	(\$14,828,079)	-418
Jeff Davis	(\$5,638,773)	(\$2,769,893)	(\$1,608,373)	(\$1,039,087)	-30
Jefferson	(\$517,804,618)	(\$255,959,924)	(\$159,237,258)	(\$89,742,477)	-2,761
Jim Hogg	(\$9,038,201)	(\$4,572,313)	(\$2,459,251)	(\$1,802,359)	-44
Jim Wells	(\$59,516,641)	(\$32,952,363)	(\$18,487,981)	(\$11,715,336)	-331
Johnson	(\$242,401,917)	(\$119,590,371)	(\$73,353,412)	(\$43,481,920)	-1,317
Jones	(\$43,131,090)	(\$21,820,578)	(\$12,285,162)	(\$6,753,490)	-211
Karnes	(\$35,740,026)	(\$16,381,043)	(\$8,983,093)	(\$5,181,783)	-149
Kaufman	(\$160,390,119)	(\$78,018,004)	(\$46,792,689)	(\$29,138,143)	-864
Kendall	(\$70,035,099)	(\$32,340,307)	(\$18,534,184)	(\$11,189,648)	-326
Kenedy	(\$2,945,314)	(\$1,512,591)	(\$776,644)	(\$567,639)	-15
Kent	(\$2,434,018)	(\$1,178,427)	(\$638,791)	(\$342,831)	-10
Kerr	(\$128,001,326)	(\$63,562,950)	(\$36,682,493)	(\$22,904,984)	-678
Kimble	(\$13,025,097)	(\$5,701,757)	(\$3,131,892)	(\$2,027,654)	-55
King	(\$2,320,451)	(\$1,246,441)	(\$749,892)	(\$307,098)	-12

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Kinney	(\$10,396,702)	(\$4,900,807)	(\$2,516,815)	(\$1,614,717)	-45
Kleberg	(\$52,051,677)	(\$26,396,627)	(\$14,812,157)	(\$8,786,502)	-260
Knox	(\$8,435,084)	(\$4,453,180)	(\$2,459,017)	(\$1,215,075)	-39
La Salle	(\$7,241,298)	(\$3,911,869)	(\$2,143,149)	(\$1,577,064)	-41
Lamar	(\$100,748,866)	(\$49,965,739)	(\$30,417,950)	(\$20,344,697)	-582
Lamb	(\$16,674,768)	(\$7,711,315)	(\$4,569,497)	(\$2,907,498)	-80
Lampasas	(\$45,003,275)	(\$22,670,739)	(\$13,415,022)	(\$9,011,797)	-261
Lavaca	(\$49,134,146)	(\$26,649,067)	(\$15,917,798)	(\$9,567,252)	-288
Lee	(\$32,088,060)	(\$16,190,734)	(\$9,159,648)	(\$5,276,989)	-157
Leon	(\$32,484,556)	(\$17,423,308)	(\$9,809,856)	(\$6,999,488)	-182
Liberty	(\$151,761,740)	(\$78,156,011)	(\$45,485,060)	(\$25,029,346)	-775
Limestone	(\$45,821,224)	(\$23,670,332)	(\$13,958,448)	(\$9,086,895)	-252
Lipscomb	(\$5,791,450)	(\$2,784,610)	(\$1,393,874)	(\$672,683)	-22
Live Oak	(\$37,098,200)	(\$17,622,548)	(\$9,815,098)	(\$6,308,258)	-168
Llano	(\$75,607,923)	(\$36,739,963)	(\$21,169,857)	(\$13,742,990)	-400
Loving	(\$1,706,913)	(\$827,787)	(\$344,792)	(\$105,143)	-4
Lubbock	(\$468,812,570)	(\$244,020,074)	(\$145,687,997)	(\$78,853,223)	-2,564
Lynn	(\$6,838,780)	(\$3,334,418)	(\$1,932,257)	(\$797,032)	-31
Madison	(\$19,028,233)	(\$9,746,024)	(\$5,491,612)	(\$4,205,505)	-109
Marion	(\$26,862,756)	(\$13,758,675)	(\$7,952,002)	(\$5,256,882)	-151
Martin	(\$6,396,274)	(\$3,037,162)	(\$1,673,071)	(\$899,473)	-27
Mason	(\$12,966,784)	(\$6,423,092)	(\$3,451,750)	(\$2,102,753)	-61
Matagorda	(\$77,122,508)	(\$35,394,998)	(\$20,642,500)	(\$13,483,408)	-362
Maverick	(\$52,002,842)	(\$26,712,252)	(\$15,406,323)	(\$10,513,763)	-296
McCulloch	(\$19,472,417)	(\$10,118,657)	(\$6,126,003)	(\$3,830,014)	-111
McLennan	(\$472,020,510)	(\$225,506,795)	(\$132,665,623)	(\$74,797,914)	-2,385
McMullen	(\$1,016,233)	(\$489,586)	(\$251,292)	(\$105,561)	-4
Medina	(\$71,915,028)	(\$34,474,824)	(\$19,596,331)	(\$12,766,712)	-369
Menard	(\$6,236,165)	(\$3,258,537)	(\$1,782,076)	(\$1,201,573)	-32
Midland	(\$204,603,411)	(\$103,844,382)	(\$57,656,355)	(\$30,444,501)	-934
Milam	(\$46,104,476)	(\$23,265,973)	(\$13,912,925)	(\$8,810,978)	-254
Mills	(\$7,562,433)	(\$4,583,757)	(\$2,903,791)	(\$1,969,320)	-56
Mitchell	(\$17,082,968)	(\$8,834,078)	(\$4,994,373)	(\$3,049,396)	-87
Montague	(\$53,146,310)	(\$25,941,176)	(\$14,173,623)	(\$8,786,502)	-253
Montgomery	(\$830,769,531)	(\$397,306,070)	(\$225,352,125)	(\$106,845,610)	-3,623
Moore	(\$27,583,816)	(\$12,077,606)	(\$6,643,636)	(\$3,759,512)	-108
Morris	(\$26,731,819)	(\$11,717,629)	(\$7,018,450)	(\$3,172,337)	-111
Motley	(\$4,108,230)	(\$1,951,095)	(\$1,032,808)	(\$648,818)	-18
Nacogdoches	(\$95,344,307)	(\$50,820,071)	(\$31,103,064)	(\$20,802,231)	-607
Navarro	(\$95,172,364)	(\$47,234,536)	(\$28,485,621)	(\$16,216,906)	-516
Newton	(\$13,165,155)	(\$8,204,230)	(\$5,311,823)	(\$3,619,642)	-98
Nolan	(\$37,511,602)	(\$19,783,161)	(\$11,100,838)	(\$6,534,128)	-192
Nueces	(\$697,632,376)	(\$323,918,879)	(\$185,976,150)	(\$95,975,637)	-3,069
Ochiltree	(\$11,543,356)	(\$5,560,420)	(\$2,988,229)	(\$1,591,574)	-48
Oldham	(\$1,105,589)	(\$625,078)	(\$382,151)	(\$351,122)	-8

The Total Annual Impact of Morbidity Losses Associated with the Incidence of Cancer on Business Activity in Texas: County Results

MSA	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Orange	(\$169,943,179)	(\$83,386,683)	(\$50,732,501)	(\$31,089,072)	-892
Palo Pinto	(\$73,381,879)	(\$34,509,634)	(\$19,396,681)	(\$11,565,139)	-340
Panola	(\$50,695,215)	(\$25,845,137)	(\$14,715,323)	(\$8,396,850)	-252
Parker	(\$208,361,975)	(\$97,431,942)	(\$56,192,399)	(\$32,968,157)	-989
Parmer	(\$4,893,635)	(\$2,244,162)	(\$1,293,261)	(\$449,220)	-21
Pecos	(\$20,656,509)	(\$10,337,094)	(\$5,689,650)	(\$3,830,014)	-103
Polk	(\$149,694,946)	(\$76,694,399)	(\$43,365,562)	(\$27,410,882)	-759
Potter	(\$236,686,504)	(\$123,390,153)	(\$70,062,129)	(\$37,398,957)	-1,190
Presidio	(\$11,502,492)	(\$5,523,457)	(\$3,193,571)	(\$2,177,851)	-59
Rains	(\$23,145,837)	(\$10,787,905)	(\$5,987,187)	(\$4,180,904)	-109
Randall	(\$209,309,339)	(\$108,511,284)	(\$62,945,910)	(\$35,722,711)	-1,105
Reagan	(\$3,440,973)	(\$1,780,158)	(\$952,080)	(\$648,887)	-16
Real	(\$11,824,122)	(\$5,404,177)	(\$2,931,567)	(\$1,802,359)	-50
Red River	(\$34,143,833)	(\$16,218,498)	(\$9,321,070)	(\$5,943,335)	-171
Reeves	(\$18,576,954)	(\$9,595,469)	(\$5,323,383)	(\$3,905,112)	-99
Refugio	(\$16,410,587)	(\$8,208,643)	(\$4,341,378)	(\$3,604,719)	-81
Roberts	(\$1,580,887)	(\$719,297)	(\$373,566)	(\$294,404)	-7
Robertson	(\$34,211,693)	(\$16,831,264)	(\$10,140,242)	(\$7,359,634)	-196
Rockwall	(\$83,860,933)	(\$42,676,105)	(\$25,514,120)	(\$15,169,858)	-464
Runnels	(\$29,246,121)	(\$13,169,125)	(\$7,176,417)	(\$4,199,860)	-121
Rusk	(\$103,419,831)	(\$50,393,726)	(\$29,014,485)	(\$15,675,240)	-489
Sabine	(\$27,801,709)	(\$13,779,993)	(\$8,586,158)	(\$5,562,611)	-157
San Augustine	(\$24,148,239)	(\$11,604,415)	(\$6,408,991)	(\$3,960,877)	-115
San Jacinto	(\$54,939,413)	(\$26,865,209)	(\$15,809,535)	(\$10,213,370)	-293
San Patricio	(\$124,317,301)	(\$58,169,550)	(\$33,439,065)	(\$21,450,076)	-592
San Saba	(\$11,368,256)	(\$6,065,379)	(\$3,599,610)	(\$2,553,342)	-71
Schleicher	(\$3,784,060)	(\$1,943,568)	(\$1,079,325)	(\$426,631)	-17
Scurry	(\$29,167,256)	(\$15,927,019)	(\$8,729,262)	(\$5,979,982)	-157
Shackelford	(\$6,153,084)	(\$3,096,966)	(\$1,653,786)	(\$955,564)	-28
Shelby	(\$37,879,098)	(\$20,448,582)	(\$13,018,925)	(\$8,477,063)	-246
Sherman	(\$1,245,761)	(\$576,118)	(\$328,512)	(\$177,724)	-6
Smith	(\$492,014,094)	(\$242,078,457)	(\$133,688,163)	(\$72,713,970)	-2,252
Somervell	(\$8,507,456)	(\$3,954,134)	(\$2,424,070)	(\$975,378)	-42
Starr	(\$41,343,997)	(\$23,376,243)	(\$14,005,714)	(\$10,363,566)	-276
Stephens	(\$19,709,258)	(\$10,652,499)	(\$5,977,533)	(\$4,184,634)	-106
Sterling	(\$1,467,359)	(\$845,157)	(\$479,949)	(\$375,492)	-9
Stonewall	(\$3,126,763)	(\$1,753,877)	(\$987,005)	(\$687,846)	-18
Sutton	(\$7,198,323)	(\$3,767,919)	(\$2,087,859)	(\$1,426,868)	-37
Swisher	(\$8,567,491)	(\$3,957,160)	(\$2,322,175)	(\$1,382,989)	-42
Tarrant	(\$3,004,622,385)	(\$1,484,400,065)	(\$861,138,850)	(\$424,530,731)	-14,282
Taylor	(\$254,129,895)	(\$126,515,779)	(\$71,835,213)	(\$37,624,252)	-1,205
Terrell	(\$1,794,750)	(\$1,062,374)	(\$631,287)	(\$331,902)	-11
Terry	(\$19,008,264)	(\$9,817,268)	(\$5,162,417)	(\$3,746,839)	-92
Throckmorton	(\$2,440,180)	(\$1,276,340)	(\$664,733)	(\$402,007)	-11
Titus	(\$40,057,880)	(\$19,351,580)	(\$11,737,125)	(\$8,486,860)	-222

**The Total Annual Impact of Morbidity Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
County Results**

MSA	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Tom Green	(\$212,427,522)	(\$103,666,876)	(\$57,313,519)	(\$33,193,452)	-1,020
Travis	(\$1,153,609,701)	(\$600,786,572)	(\$360,282,978)	(\$178,132,310)	-6,094
Trinity	(\$38,653,528)	(\$21,118,422)	(\$12,429,095)	(\$8,181,970)	-237
Tyler	(\$44,601,841)	(\$23,057,989)	(\$13,894,699)	(\$8,901,347)	-258
Upshur	(\$87,380,975)	(\$43,815,416)	(\$25,073,528)	(\$15,470,251)	-443
Upton	(\$5,561,237)	(\$2,815,101)	(\$1,487,423)	(\$823,197)	-24
Uvalde	(\$41,669,677)	(\$21,745,647)	(\$12,923,725)	(\$7,885,322)	-241
Val Verde	(\$54,858,637)	(\$30,656,908)	(\$19,003,394)	(\$11,565,139)	-354
Van Zandt	(\$99,404,162)	(\$56,095,153)	(\$32,900,259)	(\$21,628,312)	-620
Victoria	(\$195,230,160)	(\$95,303,150)	(\$54,478,226)	(\$29,213,242)	-892
Walker	(\$155,836,629)	(\$80,091,594)	(\$48,451,240)	(\$31,015,601)	-908
Waller	(\$60,244,442)	(\$26,603,249)	(\$14,601,060)	(\$9,762,780)	-265
Ward	(\$18,052,332)	(\$9,267,047)	(\$5,146,919)	(\$3,529,620)	-92
Washington	(\$68,758,913)	(\$35,686,694)	(\$21,148,071)	(\$12,339,849)	-376
Webb	(\$218,786,817)	(\$114,672,091)	(\$63,550,634)	(\$39,276,415)	-1,123
Wharton	(\$84,561,936)	(\$44,114,169)	(\$24,996,773)	(\$15,550,621)	-442
Wheeler	(\$8,963,148)	(\$4,976,833)	(\$2,796,767)	(\$1,948,252)	-51
Wichita	(\$256,475,234)	(\$138,350,992)	(\$78,636,741)	(\$44,533,296)	-1,348
Wilbarger	(\$32,940,420)	(\$15,791,406)	(\$9,534,069)	(\$6,082,963)	-173
Willacy	(\$24,255,798)	(\$13,705,199)	(\$7,945,160)	(\$5,515,804)	-150
Williamson	(\$308,892,367)	(\$164,955,512)	(\$101,519,734)	(\$57,161,059)	-1,813
Wilson	(\$66,504,941)	(\$33,104,366)	(\$19,134,006)	(\$12,391,221)	-363
Winkler	(\$10,149,136)	(\$5,248,939)	(\$2,903,615)	(\$1,840,459)	-50
Wise	(\$90,632,523)	(\$47,133,837)	(\$26,438,308)	(\$15,920,841)	-458
Wood	(\$128,295,617)	(\$62,837,901)	(\$36,033,920)	(\$21,257,034)	-640
Yoakum	(\$9,561,184)	(\$4,857,875)	(\$2,634,162)	(\$1,749,305)	-46
Young	(\$47,998,805)	(\$24,706,537)	(\$13,733,892)	(\$8,431,615)	-235
Zapata	(\$14,607,366)	(\$7,549,806)	(\$4,211,037)	(\$3,003,932)	-78
Zavala	(\$7,608,705)	(\$4,512,618)	(\$2,886,566)	(\$2,352,894)	-62
TOTAL STATE IMPACT	(\$40,640,798,625)	(\$19,892,364,078)	(\$11,521,705,873)	(\$5,909,074,190)	-193,278
NOTE: Allocations reflect best available evidence regarding incidence and industrial structure and composition of each area.					
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group					

**The Total Annual Impact of Morbidity Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
Results by Texas House District**

House District	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
1	(\$319,519,090)	(\$162,927,926)	(\$97,851,406)	(\$61,829,453)	-1,815
2	(\$305,566,967)	(\$160,956,396)	(\$96,305,406)	(\$64,734,741)	-1,816
3	(\$281,229,137)	(\$132,286,663)	(\$74,544,726)	(\$38,183,712)	-1,228
4	(\$347,056,357)	(\$168,353,148)	(\$98,900,772)	(\$59,992,283)	-1,805
5	(\$356,796,786)	(\$172,838,030)	(\$98,833,043)	(\$58,238,900)	-1,733
6	(\$373,930,712)	(\$183,979,627)	(\$101,603,004)	(\$55,262,618)	-1,711
7	(\$364,213,403)	(\$189,908,463)	(\$109,868,381)	(\$60,303,941)	-1,861
8	(\$307,466,959)	(\$154,549,402)	(\$89,834,219)	(\$55,476,230)	-1,644
9	(\$355,355,498)	(\$174,929,593)	(\$102,752,836)	(\$59,978,748)	-1,782
10	(\$245,638,923)	(\$114,533,402)	(\$67,647,875)	(\$41,187,921)	-1,199
11	(\$285,705,163)	(\$144,903,614)	(\$87,037,384)	(\$53,486,202)	-1,587
12	(\$289,040,953)	(\$143,040,299)	(\$84,639,671)	(\$50,846,889)	-1,538
13	(\$375,870,704)	(\$192,521,236)	(\$112,345,438)	(\$65,124,330)	-1,977
14	(\$177,871,353)	(\$89,889,715)	(\$51,845,986)	(\$28,324,078)	-912
15	(\$304,892,418)	(\$145,811,328)	(\$82,704,230)	(\$39,212,339)	-1,330
16	(\$304,892,418)	(\$145,811,328)	(\$82,704,230)	(\$39,212,339)	-1,330
17	(\$284,765,937)	(\$140,453,836)	(\$81,349,649)	(\$49,063,178)	-1,454
18	(\$362,537,783)	(\$185,112,814)	(\$109,745,836)	(\$66,258,317)	-1,976
19	(\$386,409,560)	(\$197,147,241)	(\$114,471,561)	(\$73,834,920)	-2,065
20	(\$208,234,946)	(\$104,641,771)	(\$62,312,455)	(\$36,856,663)	-1,116
21	(\$356,352,842)	(\$175,532,256)	(\$108,057,914)	(\$63,396,364)	-1,886
22	(\$331,394,956)	(\$163,814,351)	(\$101,911,845)	(\$57,435,185)	-1,767
23	(\$331,125,092)	(\$152,414,817)	(\$87,971,134)	(\$48,810,808)	-1,505
24	(\$347,045,734)	(\$161,954,452)	(\$94,641,002)	(\$54,208,962)	-1,651
25	(\$271,113,238)	(\$127,886,766)	(\$75,056,635)	(\$45,641,156)	-1,300
26	(\$210,975,939)	(\$99,036,491)	(\$55,596,484)	(\$27,735,891)	-885
27	(\$210,975,939)	(\$99,036,491)	(\$55,596,484)	(\$27,735,891)	-885
28	(\$210,975,939)	(\$99,036,491)	(\$55,596,484)	(\$27,735,891)	-885
29	(\$246,897,294)	(\$117,716,796)	(\$69,254,354)	(\$40,928,044)	-1,193
30	(\$387,576,767)	(\$186,208,444)	(\$105,643,166)	(\$61,063,835)	-1,786
31	(\$232,145,952)	(\$118,704,907)	(\$67,440,160)	(\$43,088,166)	-1,203
32	(\$341,839,864)	(\$158,720,250)	(\$91,128,313)	(\$47,028,062)	-1,504
33	(\$183,790,788)	(\$94,059,893)	(\$55,947,274)	(\$31,522,483)	-986
34	(\$355,792,512)	(\$165,198,628)	(\$94,847,836)	(\$48,947,575)	-1,565
35	(\$170,651,647)	(\$88,939,146)	(\$53,214,847)	(\$31,397,701)	-984
36	(\$151,142,109)	(\$80,799,050)	(\$48,491,920)	(\$28,338,947)	-891
37	(\$202,360,092)	(\$102,523,239)	(\$61,128,596)	(\$36,461,730)	-1,138
38	(\$197,541,995)	(\$100,082,209)	(\$59,673,153)	(\$35,593,594)	-1,111
39	(\$151,142,109)	(\$80,799,050)	(\$48,491,920)	(\$28,338,947)	-891
40	(\$151,142,109)	(\$80,799,050)	(\$48,491,920)	(\$28,338,947)	-891
41	(\$151,142,109)	(\$80,799,050)	(\$48,491,920)	(\$28,338,947)	-891
42	(\$140,023,563)	(\$73,390,139)	(\$40,672,406)	(\$25,136,905)	-719
43	(\$275,670,952)	(\$138,629,547)	(\$78,622,452)	(\$49,461,744)	-1,398
44	(\$240,540,165)	(\$119,223,776)	(\$70,069,080)	(\$45,659,771)	-1,300
45	(\$190,780,375)	(\$95,911,437)	(\$56,734,046)	(\$33,918,625)	-1,031

**The Total Annual Impact of Morbidity Losses Associated with the Incidence
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House District	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
46	(\$188,038,381)	(\$97,928,211)	(\$58,726,125)	(\$29,035,567)	-993
47	(\$196,113,649)	(\$102,133,717)	(\$61,248,106)	(\$30,282,493)	-1,036
48	(\$196,113,649)	(\$102,133,717)	(\$61,248,106)	(\$30,282,493)	-1,036
49	(\$189,191,991)	(\$98,528,998)	(\$59,086,408)	(\$29,213,699)	-999
50	(\$188,038,381)	(\$97,928,211)	(\$58,726,125)	(\$29,035,567)	-993
51	(\$196,113,649)	(\$102,133,717)	(\$61,248,106)	(\$30,282,493)	-1,036
52	(\$120,468,023)	(\$64,332,650)	(\$39,592,696)	(\$22,292,813)	-707
53	(\$390,240,975)	(\$189,939,441)	(\$107,976,571)	(\$69,156,864)	-1,997
54	(\$222,857,967)	(\$117,634,629)	(\$71,861,268)	(\$43,689,191)	-1,338
55	(\$192,675,916)	(\$102,877,547)	(\$63,316,767)	(\$37,567,177)	-1,167
56	(\$330,414,357)	(\$157,854,757)	(\$92,865,936)	(\$52,358,540)	-1,669
57	(\$344,325,499)	(\$174,249,227)	(\$103,672,064)	(\$63,178,525)	-1,870
58	(\$282,148,600)	(\$139,185,981)	(\$85,219,887)	(\$50,146,593)	-1,530
59	(\$228,158,219)	(\$118,005,447)	(\$71,113,884)	(\$46,190,322)	-1,346
60	(\$403,611,470)	(\$199,537,569)	(\$115,291,871)	(\$74,005,347)	-2,103
61	(\$298,994,499)	(\$144,565,779)	(\$82,630,707)	(\$48,888,998)	-1,447
62	(\$315,724,701)	(\$162,800,901)	(\$99,411,752)	(\$62,546,476)	-1,846
63	(\$185,200,790)	(\$88,792,116)	(\$52,473,503)	(\$27,260,686)	-890
64	(\$185,200,790)	(\$88,792,116)	(\$52,473,503)	(\$27,260,686)	-890
65	(\$185,200,790)	(\$88,792,116)	(\$52,473,503)	(\$27,260,686)	-890
66	(\$183,204,733)	(\$94,203,610)	(\$55,794,116)	(\$29,979,813)	-958
67	(\$183,204,733)	(\$94,203,610)	(\$55,794,116)	(\$29,979,813)	-958
68	(\$358,059,157)	(\$180,487,567)	(\$103,105,058)	(\$61,939,494)	-1,793
69	(\$315,549,077)	(\$169,074,449)	(\$96,285,481)	(\$54,368,088)	-1,651
70	(\$183,204,733)	(\$94,203,610)	(\$55,794,116)	(\$29,979,813)	-958
71	(\$334,772,587)	(\$168,119,518)	(\$95,221,213)	(\$50,911,869)	-1,609
72	(\$340,922,852)	(\$164,953,102)	(\$91,573,648)	(\$53,053,477)	-1,596
73	(\$333,345,761)	(\$160,232,421)	(\$93,400,359)	(\$57,975,893)	-1,733
74	(\$197,424,500)	(\$103,597,318)	(\$60,452,485)	(\$39,641,701)	-1,129
75	(\$241,478,203)	(\$116,896,903)	(\$68,354,157)	(\$36,032,168)	-1,192
76	(\$241,478,203)	(\$116,896,903)	(\$68,354,157)	(\$36,032,168)	-1,192
77	(\$241,478,203)	(\$116,896,903)	(\$68,354,157)	(\$36,032,168)	-1,192
78	(\$241,478,203)	(\$116,896,903)	(\$68,354,157)	(\$36,032,168)	-1,192
79	(\$241,478,203)	(\$116,896,903)	(\$68,354,157)	(\$36,032,168)	-1,192
80	(\$179,479,122)	(\$93,356,813)	(\$52,931,998)	(\$33,793,144)	-964
81	(\$291,016,279)	(\$145,042,809)	(\$82,504,476)	(\$45,610,289)	-1,361
82	(\$245,539,352)	(\$124,505,080)	(\$68,876,006)	(\$37,098,821)	-1,125
83	(\$282,926,490)	(\$146,888,728)	(\$85,082,505)	(\$48,444,383)	-1,489
84	(\$281,287,542)	(\$146,412,045)	(\$87,412,798)	(\$47,311,934)	-1,538
85	(\$253,673,467)	(\$124,767,285)	(\$69,993,011)	(\$39,141,937)	-1,170
86	(\$239,655,368)	(\$123,634,501)	(\$71,852,102)	(\$40,421,214)	-1,264
87	(\$319,825,657)	(\$161,244,199)	(\$90,833,903)	(\$50,488,533)	-1,534
88	(\$227,132,862)	(\$112,410,782)	(\$63,914,039)	(\$40,891,209)	-1,131
89	(\$183,204,733)	(\$94,203,610)	(\$55,794,116)	(\$29,979,813)	-958
90	(\$273,420,637)	(\$135,080,406)	(\$78,363,635)	(\$38,632,297)	-1,300

**The Total Annual Impact of Morbidity Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
Results by Texas House District**

House District	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
91	(\$273,420,637)	(\$135,080,406)	(\$78,363,635)	(\$38,632,297)	-1,300
92	(\$273,420,637)	(\$135,080,406)	(\$78,363,635)	(\$38,632,297)	-1,300
93	(\$273,420,637)	(\$135,080,406)	(\$78,363,635)	(\$38,632,297)	-1,300
94	(\$273,420,637)	(\$135,080,406)	(\$78,363,635)	(\$38,632,297)	-1,300
95	(\$273,420,637)	(\$135,080,406)	(\$78,363,635)	(\$38,632,297)	-1,300
96	(\$273,420,637)	(\$135,080,406)	(\$78,363,635)	(\$38,632,297)	-1,300
97	(\$273,420,637)	(\$135,080,406)	(\$78,363,635)	(\$38,632,297)	-1,300
98	(\$273,420,637)	(\$135,080,406)	(\$78,363,635)	(\$38,632,297)	-1,300
99	(\$273,420,637)	(\$135,080,406)	(\$78,363,635)	(\$38,632,297)	-1,300
100	(\$288,257,678)	(\$140,535,352)	(\$79,331,461)	(\$31,815,005)	-1,222
101	(\$270,416,015)	(\$133,596,006)	(\$77,502,497)	(\$38,207,766)	-1,285
102	(\$288,257,678)	(\$140,535,352)	(\$79,331,461)	(\$31,815,005)	-1,222
103	(\$288,257,678)	(\$140,535,352)	(\$79,331,461)	(\$31,815,005)	-1,222
104	(\$288,257,678)	(\$140,535,352)	(\$79,331,461)	(\$31,815,005)	-1,222
105	(\$288,257,678)	(\$140,535,352)	(\$79,331,461)	(\$31,815,005)	-1,222
106	(\$185,200,790)	(\$88,792,116)	(\$52,473,503)	(\$27,260,686)	-890
107	(\$288,257,678)	(\$140,535,352)	(\$79,331,461)	(\$31,815,005)	-1,222
108	(\$288,257,678)	(\$140,535,352)	(\$79,331,461)	(\$31,815,005)	-1,222
109	(\$288,257,678)	(\$140,535,352)	(\$79,331,461)	(\$31,815,005)	-1,222
110	(\$288,257,678)	(\$140,535,352)	(\$79,331,461)	(\$31,815,005)	-1,222
111	(\$294,347,629)	(\$143,504,409)	(\$81,007,478)	(\$32,487,153)	-1,248
112	(\$288,257,678)	(\$140,535,352)	(\$79,331,461)	(\$31,815,005)	-1,222
113	(\$294,347,629)	(\$143,504,409)	(\$81,007,478)	(\$32,487,153)	-1,248
114	(\$294,347,629)	(\$143,504,409)	(\$81,007,478)	(\$32,487,153)	-1,248
115	(\$294,347,629)	(\$143,504,409)	(\$81,007,478)	(\$32,487,153)	-1,248
116	(\$275,232,700)	(\$138,103,785)	(\$82,255,718)	(\$42,460,583)	-1,419
117	(\$275,232,700)	(\$138,103,785)	(\$82,255,718)	(\$42,460,583)	-1,419
118	(\$275,232,700)	(\$138,103,785)	(\$82,255,718)	(\$42,460,583)	-1,419
119	(\$275,232,700)	(\$138,103,785)	(\$82,255,718)	(\$42,460,583)	-1,419
120	(\$275,232,700)	(\$138,103,785)	(\$82,255,718)	(\$42,460,583)	-1,419
121	(\$275,232,700)	(\$138,103,785)	(\$82,255,718)	(\$42,460,583)	-1,419
122	(\$275,232,700)	(\$138,103,785)	(\$82,255,718)	(\$42,460,583)	-1,419
123	(\$275,232,700)	(\$138,103,785)	(\$82,255,718)	(\$42,460,583)	-1,419
124	(\$275,232,700)	(\$138,103,785)	(\$82,255,718)	(\$42,460,583)	-1,419
125	(\$275,232,700)	(\$138,103,785)	(\$82,255,718)	(\$42,460,583)	-1,419
126	(\$304,979,878)	(\$138,786,701)	(\$78,098,430)	(\$28,455,261)	-1,143
127	(\$304,979,878)	(\$138,786,701)	(\$78,098,430)	(\$28,455,261)	-1,143
128	(\$304,979,878)	(\$138,786,701)	(\$78,098,430)	(\$28,455,261)	-1,143
129	(\$304,979,878)	(\$138,786,701)	(\$78,098,430)	(\$28,455,261)	-1,143
130	(\$304,979,878)	(\$138,786,701)	(\$78,098,430)	(\$28,455,261)	-1,143
131	(\$304,979,878)	(\$138,786,701)	(\$78,098,430)	(\$28,455,261)	-1,143
132	(\$304,979,878)	(\$138,786,701)	(\$78,098,430)	(\$28,455,261)	-1,143
133	(\$304,979,878)	(\$138,786,701)	(\$78,098,430)	(\$28,455,261)	-1,143
134	(\$304,979,878)	(\$138,786,701)	(\$78,098,430)	(\$28,455,261)	-1,143
135	(\$304,979,878)	(\$138,786,701)	(\$78,098,430)	(\$28,455,261)	-1,143

**The Total Annual Impact of Morbidity Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
Results by Texas House District**

House District	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
136	(\$120,468,023)	(\$64,332,650)	(\$39,592,696)	(\$22,292,813)	-707
137	(\$297,718,452)	(\$135,482,256)	(\$76,238,944)	(\$27,777,754)	-1,115
138	(\$297,718,452)	(\$135,482,256)	(\$76,238,944)	(\$27,777,754)	-1,115
139	(\$297,718,452)	(\$135,482,256)	(\$76,238,944)	(\$27,777,754)	-1,115
140	(\$297,718,452)	(\$135,482,256)	(\$76,238,944)	(\$27,777,754)	-1,115
141	(\$304,979,878)	(\$138,786,701)	(\$78,098,430)	(\$28,455,261)	-1,143
142	(\$304,979,878)	(\$138,786,701)	(\$78,098,430)	(\$28,455,261)	-1,143
143	(\$304,979,878)	(\$138,786,701)	(\$78,098,430)	(\$28,455,261)	-1,143
144	(\$304,979,878)	(\$138,786,701)	(\$78,098,430)	(\$28,455,261)	-1,143
145	(\$304,979,878)	(\$138,786,701)	(\$78,098,430)	(\$28,455,261)	-1,143
146	(\$304,979,878)	(\$138,786,701)	(\$78,098,430)	(\$28,455,261)	-1,143
147	(\$297,718,452)	(\$135,482,256)	(\$76,238,944)	(\$27,777,754)	-1,115
148	(\$297,718,452)	(\$135,482,256)	(\$76,238,944)	(\$27,777,754)	-1,115
149	(\$297,718,452)	(\$135,482,256)	(\$76,238,944)	(\$27,777,754)	-1,115
150	(\$297,718,452)	(\$135,482,256)	(\$76,238,944)	(\$27,777,754)	-1,115
TOTAL	(\$40,640,798,625)	(\$19,892,364,078)	(\$11,521,705,873)	(\$5,909,074,190)	-193,278

NOTE: In cases in which a county was part of more than one district, allocations are based on the percentage of the population residing in a district. This convention is adopted because of a lack of subcounty data sufficient for allocation purposes. In some instances, this approach will result in districts which reflect the same proportion of a large urban county reporting identical results. Allocations reflect district maps as currently defined.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

**The Total Annual Impact of Morbidity Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
Results by Texas Senate District**

Senate District	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
1	(\$1,784,408,676)	(\$889,960,885)	(\$512,330,884)	(\$293,068,322)	-8,880
2	(\$1,344,520,941)	(\$669,962,852)	(\$389,720,503)	(\$204,409,667)	-6,638
3	(\$1,738,699,903)	(\$876,776,124)	(\$518,332,488)	(\$313,153,147)	-9,262
4	(\$1,514,752,731)	(\$724,833,435)	(\$424,125,044)	(\$209,140,958)	-6,931
5	(\$930,860,592)	(\$481,265,700)	(\$286,660,332)	(\$172,306,818)	-5,186
6	(\$1,452,285,134)	(\$660,889,053)	(\$371,897,288)	(\$135,501,241)	-5,441
7	(\$1,452,285,134)	(\$660,889,053)	(\$371,897,288)	(\$135,501,241)	-5,441
8	(\$910,834,834)	(\$462,937,052)	(\$271,435,403)	(\$138,236,027)	-4,561
9	(\$1,386,968,667)	(\$682,839,426)	(\$393,348,216)	(\$184,669,328)	-6,405
10	(\$1,382,126,297)	(\$682,824,030)	(\$396,123,871)	(\$195,284,136)	-6,570
11	(\$1,426,039,814)	(\$662,667,414)	(\$382,807,079)	(\$193,688,332)	-6,292
12	(\$1,065,559,981)	(\$517,449,836)	(\$303,382,857)	(\$154,185,086)	-5,098
13	(\$1,381,815,263)	(\$630,935,596)	(\$354,948,474)	(\$134,550,391)	-5,243
14	(\$975,560,999)	(\$504,496,029)	(\$301,999,251)	(\$153,821,714)	-5,163
15	(\$1,379,670,877)	(\$627,844,600)	(\$353,302,423)	(\$128,726,179)	-5,169
16	(\$1,400,688,715)	(\$682,883,048)	(\$385,483,861)	(\$154,594,040)	-5,939
17	(\$1,328,867,612)	(\$611,256,058)	(\$345,478,097)	(\$143,362,862)	-5,238
18	(\$1,493,571,408)	(\$724,554,554)	(\$412,632,049)	(\$231,387,750)	-6,971
19	(\$1,229,500,220)	(\$619,262,444)	(\$364,574,333)	(\$202,713,603)	-6,419
20	(\$1,162,893,463)	(\$574,385,908)	(\$334,969,407)	(\$184,381,364)	-5,802
21	(\$993,104,069)	(\$503,082,973)	(\$289,085,226)	(\$174,753,417)	-5,132
22	(\$1,456,850,493)	(\$701,515,614)	(\$416,919,530)	(\$242,421,901)	-7,476
23	(\$1,400,688,715)	(\$682,883,048)	(\$385,483,861)	(\$154,594,040)	-5,939
24	(\$1,338,532,694)	(\$681,105,223)	(\$403,339,982)	(\$244,672,723)	-7,379
25	(\$1,220,354,268)	(\$607,386,394)	(\$359,605,255)	(\$199,979,972)	-6,360
26	(\$1,279,832,056)	(\$642,182,600)	(\$382,489,090)	(\$197,441,711)	-6,600
27	(\$852,253,751)	(\$441,385,260)	(\$262,503,039)	(\$156,281,559)	-4,852
28	(\$1,416,558,344)	(\$720,941,311)	(\$414,138,973)	(\$242,127,044)	-7,299
29	(\$1,229,409,206)	(\$595,528,483)	(\$348,164,905)	(\$184,857,720)	-6,082
30	(\$1,411,515,915)	(\$715,016,332)	(\$415,524,921)	(\$243,220,631)	-7,296
31	(\$1,299,787,854)	(\$652,423,740)	(\$369,001,943)	(\$206,041,267)	-6,213
TOTAL	(\$40,640,798,625)	(\$19,892,364,078)	(\$11,521,705,873)	(\$5,909,074,190)	-193,278

NOTE: In cases in which a county was part of more than one district, allocations are based on the percentage of the population residing in a district. This convention is adopted because of a lack of subcounty data sufficient for allocation purposes. In some instances, this approach will result in districts which reflect the same proportion of a large urban county reporting identical results. Allocations reflect district maps as currently defined.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

**The Total Annual Impact of Morbidity Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
Results by US Congressional District in Texas**

US Congressional District in Texas	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
1	(\$1,504,439,564)	(\$753,452,336)	(\$434,310,443)	(\$244,411,327)	-7,487
2	(\$1,234,442,364)	(\$561,755,695)	(\$316,112,695)	(\$115,176,055)	-4,625
3	(\$741,146,421)	(\$381,096,424)	(\$225,712,561)	(\$121,281,969)	-3,874
4	(\$1,223,408,048)	(\$620,390,813)	(\$372,626,074)	(\$237,413,670)	-6,881
5	(\$1,313,233,436)	(\$653,654,206)	(\$377,668,002)	(\$197,892,248)	-6,432
6	(\$1,143,872,710)	(\$558,897,578)	(\$326,579,634)	(\$169,953,909)	-5,522
7	(\$1,234,442,364)	(\$561,755,695)	(\$316,112,695)	(\$115,176,055)	-4,625
8	(\$1,356,360,502)	(\$657,114,667)	(\$378,108,151)	(\$191,835,347)	-6,277
9	(\$1,210,511,303)	(\$553,648,523)	(\$311,427,811)	(\$120,343,416)	-4,622
10	(\$1,118,911,974)	(\$542,779,497)	(\$313,818,926)	(\$151,502,374)	-5,146
11	(\$1,375,174,229)	(\$683,048,948)	(\$388,739,888)	(\$231,102,653)	-6,807
12	(\$1,175,141,599)	(\$575,978,159)	(\$333,456,383)	(\$170,781,812)	-5,595
13	(\$1,297,463,989)	(\$663,996,341)	(\$378,272,884)	(\$217,130,524)	-6,510
14	(\$1,353,564,276)	(\$648,166,500)	(\$388,836,607)	(\$222,356,233)	-6,753
15	(\$740,335,110)	(\$383,858,175)	(\$227,107,569)	(\$136,748,369)	-4,141
16	(\$1,050,430,184)	(\$508,501,527)	(\$297,340,581)	(\$156,739,930)	-5,185
17	(\$1,103,434,549)	(\$548,892,478)	(\$321,862,210)	(\$184,397,409)	-5,732
18	(\$1,234,442,364)	(\$561,755,695)	(\$316,112,695)	(\$115,176,055)	-4,625
19	(\$1,185,019,019)	(\$605,525,644)	(\$349,729,768)	(\$197,758,435)	-6,082
20	(\$1,128,454,071)	(\$566,225,519)	(\$337,248,445)	(\$174,088,390)	-5,819
21	(\$1,145,602,687)	(\$569,853,292)	(\$335,703,744)	(\$187,616,916)	-5,946
22	(\$951,816,533)	(\$446,373,832)	(\$253,559,788)	(\$127,301,518)	-4,070
23	(\$1,019,401,210)	(\$514,044,482)	(\$300,854,574)	(\$172,691,418)	-5,357
24	(\$1,119,039,059)	(\$547,285,981)	(\$313,786,999)	(\$141,153,480)	-5,032
25	(\$992,519,371)	(\$498,180,916)	(\$298,663,010)	(\$173,799,352)	-5,378
26	(\$859,296,382)	(\$415,521,202)	(\$244,220,482)	(\$124,916,033)	-4,116
27	(\$1,450,059,490)	(\$690,313,497)	(\$395,342,709)	(\$221,971,079)	-6,696
28	(\$783,297,674)	(\$402,962,530)	(\$233,508,285)	(\$136,565,944)	-4,152
29	(\$1,234,442,364)	(\$561,755,695)	(\$316,112,695)	(\$115,176,055)	-4,625
30	(\$1,193,630,383)	(\$581,935,119)	(\$328,499,290)	(\$131,741,008)	-5,061
31	(\$638,664,608)	(\$341,034,391)	(\$209,888,817)	(\$121,458,728)	-3,810
32	(\$1,162,395,965)	(\$568,039,590)	(\$321,368,977)	(\$130,955,347)	-4,978
33	(\$1,179,873,347)	(\$578,941,686)	(\$331,218,060)	(\$147,875,639)	-5,296
34	(\$865,414,982)	(\$445,071,271)	(\$261,866,244)	(\$159,023,137)	-4,818
35	(\$973,641,662)	(\$492,345,730)	(\$292,869,797)	(\$155,190,468)	-5,089
36	(\$1,347,474,834)	(\$648,210,447)	(\$373,058,384)	(\$190,371,887)	-6,116
TOTAL	(\$40,640,798,625)	(\$19,892,364,078)	(\$11,521,705,873)	(\$5,909,074,190)	-193,278

NOTE: In cases in which a county was part of more than one district, allocations are based on the percentage of the population residing in a district. This convention is adopted because of a lack of subcounty data sufficient for allocation purposes. In some instances, this approach will result in districts which reflect the same proportion of a large urban county reporting identical results. Allocations reflect district maps as currently defined.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

Total Annual Impact of Mortality Losses Associated with the Incidence of Cancer on Business Activity in Texas

**The Total Annual Impact of Mortality Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
Results by Detailed Industrial Category**

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$1,400,935,729)	(\$417,077,244)	(\$252,213,572)	(4,670)
Mining	(\$10,051,900,468)	(\$4,830,767,424)	(\$1,652,021,518)	(6,764)
Construction	(\$4,022,244,395)	(\$1,960,575,459)	(\$1,478,358,137)	(23,172)
Nondurable Manufacturing	(\$13,321,955,622)	(\$3,682,651,444)	(\$1,942,333,120)	(20,644)
Durable Manufacturing	(\$6,409,115,165)	(\$2,665,938,354)	(\$1,794,684,541)	(17,786)
Transportation and Utilities	(\$10,136,334,481)	(\$3,522,916,898)	(\$1,967,902,693)	(20,876)
Information	(\$2,829,077,312)	(\$1,884,583,568)	(\$830,896,959)	(7,650)
Wholesale Trade	(\$3,871,360,450)	(\$3,019,969,352)	(\$1,695,494,746)	(19,965)
Retail Trade (including Restaurants)	(\$15,877,753,533)	(\$12,290,148,045)	(\$7,085,321,740)	(225,442)
FIRE	(\$22,661,038,483)	(\$6,735,283,153)	(\$2,399,496,569)	(23,125)
Business Services	(\$6,933,499,639)	(\$5,029,972,278)	(\$4,072,419,400)	(48,290)
Health Services	(\$4,490,823,561)	(\$3,610,574,419)	(\$2,887,071,253)	(51,362)
Other Services	(\$7,196,276,652)	(\$3,800,564,277)	(\$2,900,748,230)	(68,672)
TOTAL	(\$109,202,315,491)	(\$53,451,021,915)	(\$30,958,962,479)	(538,418)
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				

**The Total Annual Impact of Mortality Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
Comptroller's Economic Region Results**

Economic Region	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
High Plains	(\$3,761,631,598)	(\$1,922,617,945)	(\$1,113,210,700)	(\$631,701,007)	-20,114
Northwest Texas	(\$3,692,355,021)	(\$1,898,506,952)	(\$1,079,811,403)	(\$633,521,398)	-19,481
Metroplex	(\$27,607,871,602)	(\$13,562,097,258)	(\$7,846,741,949)	(\$3,790,322,251)	-133,915
Upper East Texas	(\$7,093,548,874)	(\$3,570,182,353)	(\$2,068,706,154)	(\$1,206,190,518)	-37,667
Southeast Texas	(\$4,713,620,813)	(\$2,369,094,776)	(\$1,435,271,687)	(\$864,257,620)	-26,525
Gulf Coast	(\$27,451,438,843)	(\$12,671,330,962)	(\$7,183,593,030)	(\$3,016,093,962)	-114,081
Capital	(\$4,971,975,214)	(\$2,551,760,472)	(\$1,518,356,959)	(\$811,010,354)	-27,312
Central Texas	(\$5,011,674,498)	(\$2,520,564,726)	(\$1,493,055,143)	(\$898,415,542)	-28,271
Alamo	(\$11,123,517,409)	(\$5,534,053,234)	(\$3,263,127,374)	(\$1,775,760,257)	-59,058
South Texas	(\$7,493,253,779)	(\$3,770,307,854)	(\$2,192,871,011)	(\$1,285,988,787)	-40,533
West Texas	(\$2,917,587,271)	(\$1,449,160,195)	(\$810,369,246)	(\$461,529,367)	-14,225
Upper Rio Grande	(\$3,363,840,568)	(\$1,631,345,187)	(\$953,847,825)	(\$502,962,470)	-17,236
TOTAL STATE IMPACT	(\$109,202,315,491)	(\$53,451,021,915)	(\$30,958,962,479)	(\$15,877,753,533)	-538,418
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group					

**The Total Annual Impact of Mortality Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
Council of Governments (COG) Region Results**

COG	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Panhandle	(\$2,009,422,717)	(\$1,015,983,697)	(\$578,568,577)	(\$328,768,199)	-10,320
South Plains	(\$1,752,208,882)	(\$906,634,248)	(\$534,642,123)	(\$302,932,808)	-9,794
Nortex	(\$1,509,798,929)	(\$790,715,616)	(\$449,428,113)	(\$262,262,233)	-8,063
North Central Texas	(\$26,450,127,487)	(\$12,969,977,631)	(\$7,488,974,724)	(\$3,570,809,889)	-127,181
Ark-Tex	(\$1,626,735,752)	(\$822,529,530)	(\$494,125,818)	(\$314,429,995)	-9,449
East Texas	(\$5,466,813,123)	(\$2,747,652,823)	(\$1,574,580,336)	(\$891,760,523)	-28,218
West Central Texas	(\$2,182,556,092)	(\$1,107,791,336)	(\$630,383,290)	(\$371,259,165)	-11,418
Rio Grande	(\$3,363,840,568)	(\$1,631,345,187)	(\$953,847,825)	(\$502,962,470)	-17,236
Permian Basin	(\$1,996,958,066)	(\$997,554,877)	(\$559,108,391)	(\$312,755,963)	-9,610
Concho Valley	(\$920,629,205)	(\$451,605,318)	(\$251,260,855)	(\$148,773,403)	-4,615
Heart of Texas	(\$2,184,829,988)	(\$1,054,786,135)	(\$618,449,103)	(\$365,783,737)	-11,654
Capital Area	(\$4,971,975,214)	(\$2,551,760,472)	(\$1,518,356,959)	(\$811,010,354)	-27,312
Brazos Valley	(\$1,219,773,729)	(\$622,818,928)	(\$361,603,909)	(\$217,327,826)	-6,724
Deep East Texas	(\$2,272,740,329)	(\$1,165,805,743)	(\$698,177,643)	(\$436,751,774)	-13,222
South East Texas	(\$2,440,880,483)	(\$1,203,289,033)	(\$737,094,043)	(\$427,505,846)	-13,303
Houston-Galveston Area	(\$27,451,438,843)	(\$12,671,330,962)	(\$7,183,593,030)	(\$3,016,093,962)	-114,081
Golden Crescent	(\$1,110,825,383)	(\$552,621,988)	(\$319,696,634)	(\$185,116,628)	-5,698
Alamo Area	(\$10,013,705,694)	(\$4,981,920,469)	(\$2,943,681,969)	(\$1,590,749,193)	-53,364
South Texas	(\$708,105,803)	(\$374,681,723)	(\$210,267,315)	(\$136,079,967)	-3,939
Coastal Bend	(\$3,258,750,067)	(\$1,547,787,161)	(\$880,177,265)	(\$490,489,576)	-15,435
Lower Rio Grande Valley	(\$2,941,857,663)	(\$1,539,755,885)	(\$920,849,814)	(\$541,703,422)	-17,614
Texoma	(\$1,157,744,115)	(\$592,119,627)	(\$357,767,225)	(\$219,512,362)	-6,734
Central Texas	(\$1,607,070,781)	(\$842,959,662)	(\$513,002,130)	(\$315,303,979)	-9,893
Middle Rio Grande	(\$583,526,578)	(\$307,593,862)	(\$181,325,388)	(\$117,610,259)	-3,541
Border Region	(\$7,599,130,197)	(\$3,854,443,526)	(\$2,266,925,151)	(\$1,298,688,018)	-42,341
TOTAL STATE IMPACT	(\$109,202,315,491)	(\$53,451,021,915)	(\$30,958,962,479)	(\$15,877,753,533)	-538,418
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group					

**The Total Annual Impact of Mortality Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
Metropolitan Statistical Area (MSA) and Rural Texas Results**

MSA	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Abilene	(\$1,069,262,947)	(\$531,722,144)	(\$300,648,832)	(\$160,208,161)	-5,261
Amarillo	(\$1,300,252,219)	(\$674,602,422)	(\$385,846,793)	(\$209,664,731)	-6,872
Austin-Round Rock	(\$4,132,514,659)	(\$2,140,002,762)	(\$1,282,937,076)	(\$671,535,429)	-22,955
Beaumont-Port Arthur	(\$2,494,815,748)	(\$1,236,911,236)	(\$758,879,975)	(\$442,283,912)	-13,720
Brownsville- Harlingen	(\$1,190,298,531)	(\$602,403,009)	(\$358,956,053)	(\$212,972,736)	-6,915
College Station- Bryan	(\$754,367,968)	(\$382,217,472)	(\$221,451,925)	(\$128,491,864)	-4,086
Corpus Christi	(\$2,632,995,060)	(\$1,222,577,516)	(\$698,924,964)	(\$376,118,665)	-12,093
Dallas-Plano-Irving MD*	(\$16,039,598,960)	(\$7,845,483,651)	(\$4,502,013,746)	(\$2,029,098,687)	-74,887
Fort Worth- Arlington MD*	(\$9,723,035,021)	(\$4,782,558,020)	(\$2,784,378,881)	(\$1,420,163,933)	-48,472
El Paso	(\$3,289,864,291)	(\$1,592,270,059)	(\$930,618,261)	(\$487,809,985)	-16,787
Houston-The Woodlands-Sugar Land	(\$26,621,381,288)	(\$12,255,659,127)	(\$6,941,153,518)	(\$2,860,631,791)	-109,506
Killeen-Temple	(\$1,347,605,320)	(\$708,932,221)	(\$432,180,246)	(\$261,536,590)	-8,319
Laredo	(\$532,017,435)	(\$278,595,498)	(\$154,389,258)	(\$95,104,215)	-2,826
Longview	(\$1,394,418,094)	(\$715,843,348)	(\$413,832,402)	(\$225,581,578)	-7,253
Lubbock	(\$1,301,466,673)	(\$676,986,926)	(\$403,297,848)	(\$215,514,501)	-7,320
McAllen-Edinburg- Mission	(\$1,700,540,241)	(\$908,547,869)	(\$545,196,181)	(\$317,182,673)	-10,373
Midland	(\$564,184,945)	(\$285,625,324)	(\$158,605,991)	(\$83,525,234)	-2,660
Odessa	(\$753,996,106)	(\$372,725,004)	(\$213,415,712)	(\$114,833,280)	-3,622
San Angelo	(\$647,807,295)	(\$315,590,397)	(\$174,359,632)	(\$100,555,891)	-3,211
San Antonio-New Braunfels	(\$9,227,882,808)	(\$4,598,117,676)	(\$2,723,227,095)	(\$1,455,903,880)	-49,217
Sherman-Denison	(\$695,447,099)	(\$361,063,383)	(\$220,082,226)	(\$140,126,954)	-4,251
Texarkana	(\$559,007,415)	(\$294,342,893)	(\$178,472,255)	(\$108,256,925)	-3,385
Tyler	(\$1,257,601,673)	(\$617,992,996)	(\$341,278,156)	(\$184,746,716)	-5,950
Victoria	(\$578,494,820)	(\$284,573,201)	(\$162,745,508)	(\$89,539,606)	-2,791
Waco	(\$1,552,823,623)	(\$746,832,950)	(\$440,484,993)	(\$248,573,425)	-8,213
Wichita Falls	(\$939,631,750)	(\$503,752,878)	(\$286,805,805)	(\$161,163,150)	-5,086
Rural Area	(\$16,901,003,501)	(\$8,515,091,931)	(\$4,944,779,145)	(\$3,076,629,021)	-92,386
TOTAL STATE IMPACT	(\$109,202,315,491)	(\$53,451,021,915)	(\$30,958,962,479)	(\$15,877,753,533)	-538,418
Metropolitan Division SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group					

The Total Annual Impact of Mortality Losses Associated with the Incidence of Cancer on Business Activity in Texas: County Results

County	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Anderson	(\$419,958,099)	(\$228,464,340)	(\$132,366,558)	(\$76,146,595)	-2,401
Andrews	(\$58,939,156)	(\$30,594,757)	(\$16,871,150)	(\$9,078,123)	-283
Angelina	(\$443,304,831)	(\$221,377,080)	(\$134,470,033)	(\$82,457,377)	-2,541
Aransas	(\$238,440,823)	(\$110,018,616)	(\$59,967,652)	(\$35,411,144)	-1,054
Archer	(\$38,357,704)	(\$19,809,468)	(\$10,617,946)	(\$6,622,455)	-195
Armstrong	(\$10,730,062)	(\$5,424,669)	(\$3,061,285)	(\$1,284,193)	-51
Atascosa	(\$221,530,381)	(\$107,034,239)	(\$60,397,380)	(\$32,881,776)	-1,034
Austin	(\$178,267,144)	(\$84,705,238)	(\$50,850,281)	(\$23,658,150)	-837
Bailey	(\$24,685,378)	(\$12,743,863)	(\$7,653,400)	(\$5,258,492)	-147
Bandera	(\$129,286,794)	(\$61,425,705)	(\$34,633,776)	(\$22,764,307)	-663
Bastrop	(\$323,868,378)	(\$159,129,158)	(\$93,974,043)	(\$58,175,450)	-1,797
Baylor	(\$46,009,487)	(\$24,503,563)	(\$14,261,047)	(\$8,599,849)	-264
Bee	(\$120,936,369)	(\$64,153,667)	(\$36,113,790)	(\$22,764,307)	-676
Bell	(\$1,013,517,350)	(\$540,607,176)	(\$332,599,929)	(\$196,278,911)	-6,343
Bexar	(\$7,392,501,848)	(\$3,709,376,701)	(\$2,209,368,119)	(\$1,134,168,346)	-39,456
Blanco	(\$50,086,420)	(\$23,736,085)	(\$13,568,249)	(\$8,742,952)	-266
Borden	(\$6,822,629)	(\$3,394,826)	(\$1,806,464)	(\$856,258)	-28
Bosque	(\$117,305,917)	(\$57,796,805)	(\$34,987,769)	(\$19,576,730)	-649
Bowie	(\$559,007,415)	(\$294,342,893)	(\$178,472,255)	(\$108,256,925)	-3,385
Brazoria	(\$1,199,266,403)	(\$571,261,272)	(\$336,127,810)	(\$197,631,571)	-5,991
Brazos	(\$544,176,821)	(\$274,669,253)	(\$158,402,664)	(\$85,998,492)	-2,883
Brewster	(\$35,658,742)	(\$19,564,235)	(\$11,888,373)	(\$7,082,229)	-226
Briscoe	(\$8,487,729)	(\$3,993,308)	(\$2,295,020)	(\$1,453,768)	-42
Brooks	(\$23,796,307)	(\$13,003,583)	(\$7,538,506)	(\$5,058,735)	-143
Brown	(\$217,058,365)	(\$117,639,375)	(\$71,562,523)	(\$50,081,475)	-1,443
Burleson	(\$106,555,872)	(\$56,568,502)	(\$32,344,449)	(\$20,234,939)	-588
Burnet	(\$291,146,755)	(\$139,282,453)	(\$80,493,921)	(\$47,552,107)	-1,483
Caldwell	(\$209,254,792)	(\$105,140,796)	(\$60,264,160)	(\$34,905,270)	-1,091
Calhoun	(\$75,125,302)	(\$30,831,416)	(\$17,723,623)	(\$9,808,255)	-301
Callahan	(\$105,413,501)	(\$51,116,801)	(\$27,996,948)	(\$17,199,698)	-510
Cameron	(\$1,190,298,531)	(\$602,403,009)	(\$358,956,053)	(\$212,972,736)	-6,915
Camp	(\$60,490,710)	(\$29,664,832)	(\$17,631,420)	(\$10,869,568)	-336
Carson	(\$13,912,675)	(\$5,855,234)	(\$2,727,792)	(\$1,085,593)	-42
Cass	(\$175,650,691)	(\$88,932,209)	(\$53,075,979)	(\$37,160,105)	-1,034
Castro	(\$15,743,569)	(\$7,623,624)	(\$4,524,516)	(\$3,239,431)	-90
Chambers	(\$139,115,358)	(\$59,895,119)	(\$32,416,538)	(\$14,768,479)	-515
Cherokee	(\$230,096,136)	(\$115,597,063)	(\$71,233,405)	(\$44,850,148)	-1,345
Childress	(\$40,658,699)	(\$20,347,499)	(\$11,716,121)	(\$8,093,976)	-230
Clay	(\$66,532,131)	(\$33,905,730)	(\$20,325,430)	(\$10,366,753)	-352
Cochran	(\$13,075,314)	(\$7,005,880)	(\$3,647,523)	(\$1,719,041)	-60
Coke	(\$41,491,302)	(\$20,087,172)	(\$11,225,799)	(\$6,549,491)	-192
Coleman	(\$84,163,723)	(\$43,554,818)	(\$24,240,316)	(\$14,670,331)	-440
Collin	(\$1,716,966,459)	(\$882,067,080)	(\$522,408,804)	(\$278,410,059)	-9,269
Collingsworth	(\$21,772,513)	(\$12,002,907)	(\$7,210,870)	(\$4,594,568)	-132
Colorado	(\$123,217,872)	(\$62,646,112)	(\$36,104,518)	(\$24,401,227)	-726

The Total Annual Impact of Mortality Losses Associated with the Incidence of Cancer on Business Activity in Texas: County Results

County	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Comal	(\$505,314,348)	(\$244,536,395)	(\$142,322,952)	(\$89,033,733)	-2,784
Comanche	(\$95,745,565)	(\$48,719,314)	(\$29,346,780)	(\$18,243,163)	-557
Concho	(\$13,744,217)	(\$7,356,171)	(\$4,627,995)	(\$2,540,083)	-87
Cooke	(\$250,452,420)	(\$124,724,911)	(\$72,332,380)	(\$38,952,258)	-1,232
Coryell	(\$219,633,331)	(\$110,782,005)	(\$65,557,503)	(\$42,493,372)	-1,293
Cottle	(\$10,147,221)	(\$5,899,745)	(\$3,516,802)	(\$1,818,835)	-60
Crane	(\$14,142,103)	(\$7,688,912)	(\$4,182,327)	(\$2,137,810)	-72
Crockett	(\$16,588,787)	(\$8,575,770)	(\$4,687,501)	(\$3,541,114)	-90
Crosby	(\$31,734,968)	(\$17,161,475)	(\$9,634,894)	(\$4,479,283)	-164
Culberson	(\$8,623,065)	(\$5,137,011)	(\$3,018,071)	(\$2,529,367)	-63
Dallam	(\$17,454,208)	(\$9,373,471)	(\$5,582,180)	(\$2,927,226)	-103
Dallas	(\$10,984,832,319)	(\$5,354,788,078)	(\$3,023,428,549)	(\$1,203,554,959)	-48,188
Dawson	(\$75,314,080)	(\$38,073,204)	(\$20,725,985)	(\$12,981,637)	-374
Deaf Smith	(\$44,573,957)	(\$21,786,543)	(\$12,816,452)	(\$6,803,796)	-236
Delta	(\$27,230,938)	(\$14,227,124)	(\$8,598,542)	(\$3,447,479)	-146
Denton	(\$1,655,388,540)	(\$793,401,309)	(\$468,712,629)	(\$241,807,524)	-8,224
DeWitt	(\$156,095,808)	(\$78,399,030)	(\$46,796,544)	(\$28,328,915)	-876
Dickens	(\$18,686,667)	(\$9,874,165)	(\$5,950,349)	(\$3,684,910)	-108
Dimmit	(\$33,974,102)	(\$17,705,803)	(\$9,932,654)	(\$7,082,229)	-193
Donley	(\$23,394,411)	(\$13,206,727)	(\$7,984,980)	(\$6,070,482)	-166
Duval	(\$59,494,092)	(\$29,034,915)	(\$15,623,897)	(\$8,581,047)	-277
Eastland	(\$152,597,883)	(\$75,592,314)	(\$42,398,697)	(\$27,823,041)	-790
Ector	(\$753,996,106)	(\$372,725,004)	(\$213,415,712)	(\$114,833,280)	-3,622
Edwards	(\$14,305,913)	(\$7,047,242)	(\$3,770,141)	(\$2,488,392)	-69
El Paso	(\$3,287,801,934)	(\$1,591,194,217)	(\$930,010,107)	(\$487,156,163)	-16,773
Ellis	(\$589,572,542)	(\$272,734,077)	(\$161,751,445)	(\$98,423,890)	-2,956
Erath	(\$153,442,505)	(\$82,949,495)	(\$50,815,716)	(\$33,893,523)	-1,014
Falls	(\$109,743,964)	(\$58,191,580)	(\$35,584,598)	(\$21,436,232)	-682
Fannin	(\$211,844,596)	(\$106,331,333)	(\$65,352,618)	(\$40,433,150)	-1,251
Fayette	(\$197,221,185)	(\$100,707,672)	(\$56,597,694)	(\$30,352,409)	-998
Fisher	(\$27,096,783)	(\$14,049,388)	(\$8,217,799)	(\$5,779,185)	-163
Floyd	(\$21,434,138)	(\$9,643,139)	(\$5,564,540)	(\$2,938,548)	-101
Foard	(\$1,874,409)	(\$1,054,390)	(\$650,485)	(\$391,850)	-13
Fort Bend	(\$1,578,488,437)	(\$740,804,034)	(\$416,102,590)	(\$206,157,857)	-6,849
Franklin	(\$68,339,644)	(\$33,960,285)	(\$18,435,844)	(\$11,795,027)	-341
Freestone	(\$132,385,155)	(\$65,469,895)	(\$35,592,766)	(\$24,281,927)	-662
Frio	(\$68,357,847)	(\$33,113,244)	(\$17,995,412)	(\$10,800,747)	-322
Gaines	(\$59,309,192)	(\$28,684,849)	(\$15,050,805)	(\$8,857,098)	-261
Galveston	(\$1,826,100,333)	(\$851,467,783)	(\$497,434,861)	(\$283,795,023)	-8,982
Garza	(\$28,035,139)	(\$13,735,557)	(\$7,562,479)	(\$4,638,376)	-133
Gillespie	(\$187,826,413)	(\$91,888,979)	(\$54,561,925)	(\$33,387,650)	-1,046
Glasscock	(\$873,940)	(\$431,704)	(\$209,387)	(\$73,179)	-3
Goliad	(\$45,886,744)	(\$24,609,149)	(\$14,074,172)	(\$10,117,470)	-271
Gonzales	(\$74,426,478)	(\$37,985,636)	(\$22,720,278)	(\$14,424,426)	-436
Gray	(\$161,063,754)	(\$75,297,305)	(\$42,223,053)	(\$25,548,553)	-726

The Total Annual Impact of Mortality Losses Associated with the Incidence of Cancer on Business Activity in Texas: County Results

County	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Grayson	(\$695,447,099)	(\$361,063,383)	(\$220,082,226)	(\$140,126,954)	-4,251
Gregg	(\$806,156,343)	(\$425,407,609)	(\$247,035,633)	(\$130,009,485)	-4,279
Grimes	(\$116,736,018)	(\$58,767,661)	(\$34,721,191)	(\$20,885,130)	-641
Guadalupe	(\$431,591,277)	(\$213,366,741)	(\$126,174,077)	(\$81,951,504)	-2,402
Hale	(\$110,159,716)	(\$59,050,043)	(\$35,745,901)	(\$26,681,525)	-728
Hall	(\$24,535,827)	(\$12,391,384)	(\$7,147,325)	(\$4,631,790)	-136
Hamilton	(\$62,432,765)	(\$30,826,297)	(\$18,622,619)	(\$13,152,711)	-372
Hansford	(\$13,620,525)	(\$6,165,608)	(\$2,991,358)	(\$1,350,521)	-44
Hardeman	(\$21,121,847)	(\$11,608,166)	(\$6,846,270)	(\$5,564,608)	-144
Hardin	(\$319,456,395)	(\$156,780,628)	(\$89,321,514)	(\$56,657,830)	-1,639
Harris	(\$18,925,821,017)	(\$8,610,651,969)	(\$4,847,522,032)	(\$1,756,063,810)	-73,433
Harrison	(\$453,330,606)	(\$210,792,849)	(\$120,371,682)	(\$58,359,698)	-1,966
Hartley	(\$7,584,004)	(\$3,732,086)	(\$2,154,086)	(\$1,384,597)	-44
Haskell	(\$48,199,547)	(\$24,837,205)	(\$14,471,097)	(\$8,322,681)	-261
Hays	(\$375,331,361)	(\$189,619,667)	(\$112,482,537)	(\$66,269,426)	-2,104
Hemphill	(\$9,444,872)	(\$4,454,852)	(\$2,277,085)	(\$1,194,801)	-36
Henderson	(\$667,103,936)	(\$322,760,550)	(\$186,117,053)	(\$109,774,545)	-3,478
Hidalgo	(\$1,700,540,241)	(\$908,547,869)	(\$545,196,181)	(\$317,182,673)	-10,373
Hill	(\$246,920,538)	(\$114,695,793)	(\$66,087,596)	(\$46,540,360)	-1,358
Hockley	(\$95,571,342)	(\$49,142,423)	(\$27,336,729)	(\$17,218,203)	-505
Hood	(\$343,639,533)	(\$162,294,146)	(\$96,014,902)	(\$60,198,944)	-1,828
Hopkins	(\$178,635,486)	(\$93,623,095)	(\$56,900,768)	(\$38,446,385)	-1,111
Houston	(\$207,690,049)	(\$101,668,219)	(\$61,938,467)	(\$28,040,945)	-1,026
Howard	(\$216,249,596)	(\$103,948,710)	(\$58,497,227)	(\$33,387,650)	-1,015
Hudspeth	(\$2,062,358)	(\$1,075,842)	(\$608,155)	(\$653,822)	-14
Hunt	(\$399,720,547)	(\$200,432,072)	(\$120,854,631)	(\$81,951,504)	-2,358
Hutchinson	(\$134,194,318)	(\$62,925,052)	(\$35,052,037)	(\$24,049,123)	-611
Irion	(\$3,248,854)	(\$1,359,726)	(\$696,575)	(\$392,942)	-11
Jack	(\$58,062,579)	(\$29,149,582)	(\$16,493,451)	(\$9,784,030)	-289
Jackson	(\$84,559,762)	(\$43,798,758)	(\$23,697,658)	(\$15,468,826)	-433
Jasper	(\$215,941,798)	(\$110,005,295)	(\$65,931,448)	(\$44,499,899)	-1,304
Jeff Davis	(\$10,899,369)	(\$5,350,345)	(\$3,106,121)	(\$1,999,775)	-59
Jefferson	(\$1,610,301,914)	(\$795,882,501)	(\$495,244,619)	(\$277,724,541)	-8,888
Jim Hogg	(\$33,007,875)	(\$16,703,887)	(\$8,986,091)	(\$6,576,355)	-166
Jim Wells	(\$162,377,065)	(\$89,890,437)	(\$50,440,234)	(\$31,870,029)	-936
Johnson	(\$689,216,890)	(\$339,727,700)	(\$208,330,201)	(\$122,927,256)	-3,870
Jones	(\$118,860,077)	(\$60,130,705)	(\$33,862,046)	(\$18,563,586)	-603
Karnes	(\$105,072,740)	(\$48,131,188)	(\$26,396,477)	(\$15,176,204)	-454
Kaufman	(\$462,033,970)	(\$224,577,673)	(\$134,660,822)	(\$83,469,124)	-2,573
Kendall	(\$181,502,057)	(\$83,722,232)	(\$47,969,538)	(\$28,834,788)	-873
Kenedy	(\$2,943,376)	(\$1,511,959)	(\$776,937)	(\$568,180)	-16
Kent	(\$2,441,755)	(\$1,182,255)	(\$641,234)	(\$342,486)	-10
Kerr	(\$423,552,219)	(\$210,180,159)	(\$121,249,831)	(\$75,375,149)	-2,322
Kimble	(\$45,712,547)	(\$19,992,115)	(\$10,976,012)	(\$7,082,229)	-201
King	(\$2,335,172)	(\$1,253,784)	(\$754,006)	(\$306,663)	-13

The Total Annual Impact of Mortality Losses Associated with the Incidence of Cancer on Business Activity in Texas: County Results

County	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Kinney	(\$23,411,492)	(\$11,028,707)	(\$5,660,111)	(\$3,626,213)	-104
Kleberg	(\$150,457,259)	(\$76,234,139)	(\$42,781,856)	(\$25,293,674)	-779
Knox	(\$28,488,689)	(\$15,037,612)	(\$8,304,023)	(\$4,089,592)	-138
La Salle	(\$18,634,703)	(\$10,054,587)	(\$5,506,692)	(\$4,046,988)	-110
Lamar	(\$295,608,446)	(\$146,566,353)	(\$89,206,681)	(\$59,517,564)	-1,768
Lamb	(\$51,542,273)	(\$23,846,453)	(\$14,129,754)	(\$8,971,260)	-256
Lampasas	(\$114,454,640)	(\$57,543,040)	(\$34,022,814)	(\$22,764,307)	-684
Lavaca	(\$142,123,212)	(\$77,033,947)	(\$46,013,024)	(\$27,546,599)	-860
Lee	(\$96,907,387)	(\$48,908,673)	(\$27,685,321)	(\$15,898,693)	-493
Leon	(\$84,612,322)	(\$45,348,998)	(\$25,525,575)	(\$18,164,494)	-490
Liberty	(\$482,564,024)	(\$248,467,550)	(\$144,660,575)	(\$79,309,287)	-2,552
Limestone	(\$135,394,755)	(\$69,990,692)	(\$41,295,978)	(\$26,811,295)	-772
Lipscomb	(\$13,053,942)	(\$6,265,939)	(\$3,135,081)	(\$1,508,883)	-51
Live Oak	(\$59,637,108)	(\$28,314,233)	(\$15,774,441)	(\$10,117,470)	-280
Llano	(\$204,098,806)	(\$99,122,827)	(\$57,074,697)	(\$36,928,764)	-1,118
Loving	(\$1,702,610)	(\$825,929)	(\$344,274)	(\$105,163)	-4
Lubbock	(\$1,251,602,371)	(\$650,972,411)	(\$388,533,842)	(\$208,925,748)	-7,071
Lynn	(\$18,129,334)	(\$8,853,039)	(\$5,129,112)	(\$2,109,470)	-85
Madison	(\$64,442,596)	(\$32,941,368)	(\$18,542,544)	(\$14,164,457)	-380
Marion	(\$90,769,667)	(\$46,455,046)	(\$26,847,351)	(\$17,705,572)	-527
Martin	(\$25,895,043)	(\$12,293,941)	(\$6,771,972)	(\$3,632,754)	-112
Mason	(\$34,427,503)	(\$17,042,928)	(\$9,154,251)	(\$5,564,608)	-168
Matagorda	(\$220,984,421)	(\$101,434,530)	(\$59,185,561)	(\$38,529,174)	-1,076
Maverick	(\$145,853,019)	(\$74,820,340)	(\$43,127,605)	(\$29,340,662)	-859
McCulloch	(\$56,856,444)	(\$29,533,461)	(\$17,877,892)	(\$11,129,217)	-336
McLennan	(\$1,443,079,660)	(\$688,641,371)	(\$404,900,395)	(\$227,137,193)	-7,531
McMullen	(\$1,013,667)	(\$489,223)	(\$251,230)	(\$105,564)	-4
Medina	(\$183,202,102)	(\$87,744,282)	(\$49,844,240)	(\$32,375,903)	-972
Menard	(\$18,405,487)	(\$9,623,165)	(\$5,264,242)	(\$3,541,114)	-97
Midland	(\$538,289,903)	(\$273,331,383)	(\$151,834,019)	(\$79,892,480)	-2,548
Milam	(\$134,381,829)	(\$67,872,409)	(\$40,600,736)	(\$25,661,257)	-767
Mills	(\$26,468,486)	(\$16,030,460)	(\$10,151,970)	(\$6,859,446)	-202
Mitchell	(\$59,045,526)	(\$30,537,674)	(\$17,270,864)	(\$10,520,802)	-310
Montague	(\$171,988,518)	(\$83,852,539)	(\$45,798,981)	(\$28,328,915)	-848
Montgomery	(\$2,103,481,585)	(\$1,005,378,131)	(\$570,491,876)	(\$268,895,206)	-9,493
Moore	(\$72,413,885)	(\$31,702,908)	(\$17,445,064)	(\$9,848,210)	-293
Morris	(\$83,971,911)	(\$36,767,562)	(\$22,022,759)	(\$9,916,195)	-362
Motley	(\$11,104,985)	(\$5,270,625)	(\$2,788,193)	(\$1,747,423)	-51
Nacogdoches	(\$277,776,771)	(\$147,897,824)	(\$90,474,835)	(\$60,198,944)	-1,827
Navarro	(\$304,998,729)	(\$151,323,281)	(\$91,245,366)	(\$51,736,729)	-1,711
Newton	(\$53,935,265)	(\$33,622,204)	(\$21,785,932)	(\$14,778,067)	-417
Nolan	(\$119,559,685)	(\$63,072,267)	(\$35,407,123)	(\$20,769,694)	-636
Nueces	(\$2,022,446,567)	(\$938,562,817)	(\$538,918,193)	(\$276,712,794)	-9,205
Ochiltree	(\$28,895,059)	(\$13,930,726)	(\$7,489,924)	(\$3,980,908)	-124
Oldham	(\$1,108,374)	(\$626,506)	(\$383,093)	(\$350,914)	-9

The Total Annual Impact of Mortality Losses Associated with the Incidence of Cancer on Business Activity in Texas: County Results

County	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Orange	(\$511,122,174)	(\$250,625,904)	(\$152,527,911)	(\$93,123,474)	-2,776
Palo Pinto	(\$229,052,272)	(\$107,663,185)	(\$60,521,015)	(\$35,917,017)	-1,097
Panola	(\$161,687,453)	(\$82,448,554)	(\$46,963,088)	(\$26,735,544)	-833
Parker	(\$569,185,553)	(\$265,900,962)	(\$153,326,370)	(\$89,539,606)	-2,794
Parmer	(\$12,498,998)	(\$5,734,690)	(\$3,305,033)	(\$1,144,780)	-56
Pecos	(\$68,323,592)	(\$34,201,425)	(\$18,831,240)	(\$12,646,837)	-355
Polk	(\$398,584,624)	(\$204,251,044)	(\$115,523,912)	(\$72,845,781)	-2,095
Potter	(\$752,269,588)	(\$392,063,793)	(\$222,686,671)	(\$118,374,395)	-3,918
Presidio	(\$18,795,101)	(\$9,023,537)	(\$5,216,999)	(\$3,541,114)	-101
Rains	(\$84,935,775)	(\$39,573,160)	(\$21,957,828)	(\$15,272,331)	-414
Randall	(\$522,231,521)	(\$270,632,220)	(\$156,987,953)	(\$88,569,637)	-2,852
Reagan	(\$12,640,102)	(\$6,545,130)	(\$3,502,208)	(\$2,383,240)	-61
Real	(\$33,304,097)	(\$15,208,200)	(\$8,246,942)	(\$5,058,735)	-147
Red River	(\$117,795,339)	(\$55,911,740)	(\$32,113,489)	(\$20,432,474)	-610
Reeves	(\$60,189,807)	(\$31,108,548)	(\$17,269,629)	(\$12,646,837)	-332
Refugio	(\$46,113,431)	(\$23,066,712)	(\$12,202,639)	(\$10,117,470)	-236
Roberts	(\$1,580,753)	(\$719,461)	(\$373,870)	(\$294,367)	-7
Robertson	(\$103,635,275)	(\$50,979,717)	(\$30,704,812)	(\$22,258,433)	-615
Rockwall	(\$231,084,585)	(\$117,483,363)	(\$70,196,866)	(\$41,481,625)	-1,319
Runnels	(\$94,171,097)	(\$42,353,694)	(\$23,075,417)	(\$13,466,953)	-403
Rusk	(\$324,332,364)	(\$158,045,724)	(\$91,040,916)	(\$49,031,733)	-1,591
Sabine	(\$69,701,083)	(\$34,506,459)	(\$21,500,597)	(\$13,887,357)	-408
San Augustine	(\$75,015,710)	(\$36,024,748)	(\$19,883,427)	(\$12,274,895)	-369
San Jacinto	(\$150,396,399)	(\$73,488,913)	(\$43,234,569)	(\$27,823,041)	-828
San Patricio	(\$372,107,670)	(\$173,996,083)	(\$100,039,119)	(\$63,994,727)	-1,835
San Saba	(\$36,182,381)	(\$19,298,276)	(\$11,446,560)	(\$8,093,976)	-233
Schleicher	(\$8,498,184)	(\$4,369,816)	(\$2,427,982)	(\$958,102)	-39
Scurry	(\$80,267,932)	(\$43,819,778)	(\$24,018,779)	(\$16,410,396)	-446
Shackelford	(\$22,638,865)	(\$11,392,290)	(\$6,086,226)	(\$3,510,276)	-106
Shelby	(\$116,758,858)	(\$62,980,076)	(\$40,095,263)	(\$26,016,821)	-784
Sherman	(\$4,603,931)	(\$2,126,543)	(\$1,211,830)	(\$652,600)	-22
Smith	(\$1,257,601,673)	(\$617,992,996)	(\$341,278,156)	(\$184,746,716)	-5,950
Somervell	(\$23,694,883)	(\$11,025,203)	(\$6,761,937)	(\$2,706,438)	-120
Starr	(\$111,091,884)	(\$62,843,828)	(\$37,663,774)	(\$27,823,041)	-769
Stephens	(\$63,041,801)	(\$34,063,959)	(\$19,124,586)	(\$13,351,485)	-352
Sterling	(\$1,467,082)	(\$845,689)	(\$480,617)	(\$375,453)	-9
Stonewall	(\$10,541,966)	(\$5,912,824)	(\$3,328,168)	(\$2,316,105)	-63
Sutton	(\$22,990,256)	(\$12,043,503)	(\$6,676,726)	(\$4,552,861)	-123
Swisher	(\$23,384,606)	(\$10,813,257)	(\$6,345,565)	(\$3,770,086)	-119
Tarrant	(\$7,834,255,024)	(\$3,866,795,116)	(\$2,243,181,614)	(\$1,098,757,202)	-38,484
Taylor	(\$844,989,368)	(\$420,474,638)	(\$238,789,838)	(\$124,444,876)	-4,147
Terrell	(\$1,799,585)	(\$1,066,869)	(\$634,809)	(\$331,900)	-11
Terry	(\$51,878,972)	(\$26,783,123)	(\$14,082,322)	(\$10,191,546)	-261
Throckmorton	(\$8,233,963)	(\$4,304,426)	(\$2,240,825)	(\$1,353,338)	-39
Titus	(\$120,495,883)	(\$58,198,270)	(\$35,299,502)	(\$25,457,841)	-692

The Total Annual Impact of Mortality Losses Associated with the Incidence of Cancer on Business Activity in Texas: County Results

County	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Tom Green	(\$644,558,441)	(\$314,230,671)	(\$173,663,057)	(\$100,162,949)	-3,200
Travis	(\$2,590,688,706)	(\$1,348,064,833)	(\$808,235,150)	(\$396,049,558)	-14,126
Trinity	(\$128,411,439)	(\$70,120,304)	(\$41,251,482)	(\$27,070,417)	-815
Tyler	(\$135,223,502)	(\$69,863,579)	(\$42,087,679)	(\$26,858,228)	-808
Upshur	(\$263,929,387)	(\$132,390,015)	(\$75,755,853)	(\$46,540,360)	-1,384
Upton	(\$13,231,039)	(\$6,701,740)	(\$3,541,256)	(\$1,956,391)	-60
Uvalde	(\$126,162,561)	(\$65,821,727)	(\$39,110,396)	(\$23,776,054)	-756
Val Verde	(\$159,344,500)	(\$88,996,418)	(\$55,155,476)	(\$33,387,650)	-1,063
Van Zandt	(\$289,177,285)	(\$163,131,269)	(\$95,662,856)	(\$62,728,312)	-1,868
Victoria	(\$532,608,076)	(\$259,964,052)	(\$148,671,336)	(\$79,422,137)	-2,520
Walker	(\$232,670,591)	(\$119,456,359)	(\$72,243,511)	(\$46,034,487)	-1,402
Waller	(\$188,276,986)	(\$83,028,032)	(\$45,546,956)	(\$30,352,409)	-854
Ward	(\$62,188,805)	(\$31,935,071)	(\$17,747,228)	(\$12,140,964)	-328
Washington	(\$199,614,824)	(\$103,543,428)	(\$61,362,674)	(\$35,621,880)	-1,128
Webb	(\$532,017,435)	(\$278,595,498)	(\$154,389,258)	(\$95,104,215)	-2,826
Wharton	(\$253,184,671)	(\$132,134,835)	(\$74,905,921)	(\$46,497,283)	-1,371
Wheeler	(\$30,210,936)	(\$16,787,385)	(\$9,440,333)	(\$6,561,002)	-180
Wichita	(\$834,741,916)	(\$450,037,680)	(\$255,862,429)	(\$144,173,942)	-4,539
Wilbarger	(\$98,868,686)	(\$47,398,201)	(\$28,619,962)	(\$18,211,445)	-537
Willacy	(\$51,018,891)	(\$28,805,006)	(\$16,697,581)	(\$11,548,014)	-326
Williamson	(\$633,371,422)	(\$338,048,308)	(\$207,981,185)	(\$116,135,724)	-3,837
Wilson	(\$182,954,000)	(\$90,911,382)	(\$52,517,013)	(\$33,893,523)	-1,031
Winkler	(\$39,690,881)	(\$20,548,005)	(\$11,374,905)	(\$7,197,603)	-202
Wise	(\$263,043,137)	(\$136,814,893)	(\$76,763,856)	(\$46,034,487)	-1,375
Wood	(\$357,243,689)	(\$174,928,816)	(\$100,318,535)	(\$58,989,918)	-1,845
Yoakum	(\$22,233,112)	(\$11,298,267)	(\$6,129,078)	(\$4,062,320)	-111
Young	(\$162,094,431)	(\$83,496,551)	(\$46,435,310)	(\$28,399,550)	-823
Zapata	(\$31,988,609)	(\$16,538,511)	(\$9,228,192)	(\$6,576,355)	-177
Zavala	(\$28,536,191)	(\$16,910,839)	(\$10,815,371)	(\$8,803,337)	-239

TOTAL STATE IMPACT	(\$109,202,315,491)	(\$53,451,021,915)	(\$30,958,962,479)	(\$15,877,753,533)	-538,418
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NOTE: Allocations reflect best available evidence regarding incidence and industrial structure and composition of each area.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

**The Total Annual Impact of Mortality Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
Results by Texas House District**

House District	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
1	(\$1,040,750,844)	(\$530,781,271)	(\$318,228,268)	(\$200,001,991)	-6,105
2	(\$867,533,317)	(\$457,186,435)	(\$273,418,255)	(\$183,126,200)	-5,337
3	(\$747,803,088)	(\$350,458,615)	(\$197,297,795)	(\$101,878,534)	-3,380
4	(\$1,015,730,237)	(\$492,468,929)	(\$289,137,977)	(\$174,581,997)	-5,461
5	(\$1,008,962,369)	(\$487,450,958)	(\$279,136,802)	(\$164,845,064)	-5,077
6	(\$955,777,271)	(\$469,674,677)	(\$259,371,398)	(\$140,407,504)	-4,522
7	(\$1,070,085,730)	(\$557,797,624)	(\$322,791,486)	(\$176,549,845)	-5,662
8	(\$1,104,262,521)	(\$559,953,308)	(\$325,292,287)	(\$198,705,611)	-6,133
9	(\$1,067,898,358)	(\$526,115,192)	(\$308,853,960)	(\$179,865,096)	-5,552
10	(\$702,980,211)	(\$327,603,370)	(\$193,391,344)	(\$117,085,563)	-3,547
11	(\$832,205,271)	(\$421,540,611)	(\$252,749,157)	(\$154,080,825)	-4,763
12	(\$868,766,183)	(\$429,701,481)	(\$254,399,934)	(\$152,406,876)	-4,790
13	(\$1,063,736,128)	(\$543,972,561)	(\$317,993,830)	(\$182,700,335)	-5,778
14	(\$457,108,530)	(\$230,722,173)	(\$133,058,238)	(\$72,238,733)	-2,422
15	(\$771,977,742)	(\$368,973,774)	(\$209,370,518)	(\$98,684,541)	-3,484
16	(\$771,977,742)	(\$368,973,774)	(\$209,370,518)	(\$98,684,541)	-3,484
17	(\$809,529,775)	(\$399,295,452)	(\$231,040,280)	(\$138,580,044)	-4,270
18	(\$865,631,015)	(\$441,412,822)	(\$260,138,654)	(\$153,166,815)	-4,782
19	(\$1,123,141,585)	(\$574,522,748)	(\$334,650,485)	(\$215,639,805)	-6,263
20	(\$564,870,297)	(\$281,525,489)	(\$166,850,518)	(\$98,763,223)	-3,094
21	(\$1,090,830,863)	(\$537,143,605)	(\$330,815,973)	(\$193,104,309)	-5,976
22	(\$1,030,593,225)	(\$509,364,801)	(\$316,956,556)	(\$177,743,706)	-5,688
23	(\$942,599,505)	(\$434,540,943)	(\$251,287,877)	(\$139,638,289)	-4,467
24	(\$1,022,616,187)	(\$476,821,958)	(\$278,563,522)	(\$158,925,213)	-5,030
25	(\$748,661,638)	(\$352,789,489)	(\$207,081,798)	(\$125,487,065)	-3,712
26	(\$429,348,855)	(\$201,498,697)	(\$113,179,904)	(\$56,074,937)	-1,863
27	(\$429,348,855)	(\$201,498,697)	(\$113,179,904)	(\$56,074,937)	-1,863
28	(\$429,348,855)	(\$201,498,697)	(\$113,179,904)	(\$56,074,937)	-1,863
29	(\$671,589,186)	(\$319,906,312)	(\$188,231,573)	(\$110,673,680)	-3,355
30	(\$1,094,270,184)	(\$526,888,974)	(\$299,435,966)	(\$173,205,389)	-5,258
31	(\$582,168,285)	(\$297,795,460)	(\$169,216,528)	(\$107,307,170)	-3,125
32	(\$990,998,818)	(\$459,895,780)	(\$264,069,914)	(\$135,589,269)	-4,510
33	(\$437,120,560)	(\$223,331,412)	(\$132,885,922)	(\$74,890,833)	-2,431
34	(\$1,031,447,749)	(\$478,667,036)	(\$274,848,278)	(\$141,123,525)	-4,694
35	(\$420,019,901)	(\$218,702,639)	(\$130,807,640)	(\$76,804,747)	-2,503
36	(\$370,717,773)	(\$198,063,435)	(\$118,852,767)	(\$69,145,823)	-2,261
37	(\$499,925,383)	(\$253,009,264)	(\$150,761,542)	(\$89,448,549)	-2,904
38	(\$488,022,398)	(\$246,985,234)	(\$147,171,982)	(\$87,318,822)	-2,835
39	(\$370,717,773)	(\$198,063,435)	(\$118,852,767)	(\$69,145,823)	-2,261
40	(\$370,717,773)	(\$198,063,435)	(\$118,852,767)	(\$69,145,823)	-2,261
41	(\$370,717,773)	(\$198,063,435)	(\$118,852,767)	(\$69,145,823)	-2,261
42	(\$340,491,158)	(\$178,301,118)	(\$98,809,125)	(\$60,866,697)	-1,809

**The Total Annual Impact of Mortality Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
Results by Texas House District**

House District	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
43	(\$805,878,363)	(\$404,274,325)	(\$229,374,999)	(\$143,922,737)	-4,226
44	(\$614,545,278)	(\$304,278,123)	(\$178,691,090)	(\$115,845,027)	-3,433
45	(\$425,417,782)	(\$213,355,752)	(\$126,050,786)	(\$75,012,378)	-2,370
46	(\$422,282,259)	(\$219,734,568)	(\$131,742,330)	(\$64,556,078)	-2,303
47	(\$440,417,080)	(\$229,171,022)	(\$137,399,976)	(\$67,328,425)	-2,401
48	(\$440,417,080)	(\$229,171,022)	(\$137,399,976)	(\$67,328,425)	-2,401
49	(\$424,872,948)	(\$221,082,633)	(\$132,550,565)	(\$64,952,127)	-2,317
50	(\$422,282,259)	(\$219,734,568)	(\$131,742,330)	(\$64,556,078)	-2,303
51	(\$440,417,080)	(\$229,171,022)	(\$137,399,976)	(\$67,328,425)	-2,401
52	(\$247,014,855)	(\$131,838,840)	(\$81,112,662)	(\$45,292,933)	-1,496
53	(\$1,134,372,694)	(\$552,375,713)	(\$314,006,339)	(\$200,231,279)	-6,010
54	(\$600,942,967)	(\$317,034,484)	(\$193,670,780)	(\$116,978,184)	-3,729
55	(\$527,029,022)	(\$281,115,731)	(\$172,951,963)	(\$102,065,034)	-3,298
56	(\$1,010,155,762)	(\$482,048,959)	(\$283,430,276)	(\$158,996,035)	-5,272
57	(\$1,003,476,947)	(\$507,480,717)	(\$301,611,528)	(\$182,172,587)	-5,621
58	(\$806,522,808)	(\$397,524,505)	(\$243,317,970)	(\$142,503,986)	-4,520
59	(\$674,456,360)	(\$349,164,510)	(\$210,580,976)	(\$136,571,846)	-4,125
60	(\$1,217,605,944)	(\$603,316,889)	(\$347,945,213)	(\$222,752,268)	-6,566
61	(\$832,228,690)	(\$402,715,855)	(\$230,090,227)	(\$135,574,093)	-4,170
62	(\$934,522,633)	(\$481,621,841)	(\$294,033,387)	(\$184,007,583)	-5,648
63	(\$413,847,135)	(\$198,350,327)	(\$117,178,157)	(\$60,451,881)	-2,056
64	(\$413,847,135)	(\$198,350,327)	(\$117,178,157)	(\$60,451,881)	-2,056
65	(\$413,847,135)	(\$198,350,327)	(\$117,178,157)	(\$60,451,881)	-2,056
66	(\$377,732,621)	(\$194,054,758)	(\$114,929,937)	(\$61,250,213)	-2,039
67	(\$377,732,621)	(\$194,054,758)	(\$114,929,937)	(\$61,250,213)	-2,039
68	(\$1,099,758,761)	(\$554,883,715)	(\$316,711,389)	(\$190,849,977)	-5,717
69	(\$1,016,004,335)	(\$544,348,443)	(\$310,021,360)	(\$174,244,441)	-5,501
70	(\$377,732,621)	(\$194,054,758)	(\$114,929,937)	(\$61,250,213)	-2,039
71	(\$1,083,409,130)	(\$543,677,610)	(\$308,059,008)	(\$163,778,157)	-5,386
72	(\$1,028,444,631)	(\$497,158,667)	(\$275,978,282)	(\$159,331,940)	-4,982
73	(\$874,642,818)	(\$420,147,606)	(\$244,854,415)	(\$151,256,171)	-4,703
74	(\$536,663,239)	(\$282,199,205)	(\$164,860,863)	(\$107,891,569)	-3,192
75	(\$657,560,387)	(\$318,238,843)	(\$186,002,021)	(\$97,431,233)	-3,355
76	(\$657,560,387)	(\$318,238,843)	(\$186,002,021)	(\$97,431,233)	-3,355
77	(\$657,560,387)	(\$318,238,843)	(\$186,002,021)	(\$97,431,233)	-3,355
78	(\$657,560,387)	(\$318,238,843)	(\$186,002,021)	(\$97,431,233)	-3,355
79	(\$657,560,387)	(\$318,238,843)	(\$186,002,021)	(\$97,431,233)	-3,355
80	(\$480,545,587)	(\$250,384,502)	(\$142,662,158)	(\$91,276,238)	-2,705
81	(\$914,814,948)	(\$455,802,838)	(\$259,408,996)	(\$143,249,970)	-4,435
82	(\$666,872,167)	(\$338,089,180)	(\$187,055,559)	(\$100,601,072)	-3,166
83	(\$776,094,535)	(\$402,462,253)	(\$232,771,882)	(\$132,515,869)	-4,220
84	(\$750,961,423)	(\$390,583,447)	(\$233,120,305)	(\$125,355,449)	-4,242

**The Total Annual Impact of Mortality Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
Results by Texas House District**

House District	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
85	(\$628,186,306)	(\$312,241,535)	(\$175,166,456)	(\$99,899,155)	-3,064
86	(\$605,451,061)	(\$311,885,515)	(\$181,228,797)	(\$101,180,950)	-3,299
87	(\$977,394,398)	(\$494,673,531)	(\$279,123,395)	(\$154,009,920)	-4,887
88	(\$626,666,416)	(\$310,982,405)	(\$177,344,122)	(\$113,606,834)	-3,263
89	(\$377,732,621)	(\$194,054,758)	(\$114,929,937)	(\$61,250,213)	-2,039
90	(\$712,917,207)	(\$351,878,356)	(\$204,129,527)	(\$99,986,905)	-3,502
91	(\$712,917,207)	(\$351,878,356)	(\$204,129,527)	(\$99,986,905)	-3,502
92	(\$712,917,207)	(\$351,878,356)	(\$204,129,527)	(\$99,986,905)	-3,502
93	(\$712,917,207)	(\$351,878,356)	(\$204,129,527)	(\$99,986,905)	-3,502
94	(\$712,917,207)	(\$351,878,356)	(\$204,129,527)	(\$99,986,905)	-3,502
95	(\$712,917,207)	(\$351,878,356)	(\$204,129,527)	(\$99,986,905)	-3,502
96	(\$712,917,207)	(\$351,878,356)	(\$204,129,527)	(\$99,986,905)	-3,502
97	(\$712,917,207)	(\$351,878,356)	(\$204,129,527)	(\$99,986,905)	-3,502
98	(\$712,917,207)	(\$351,878,356)	(\$204,129,527)	(\$99,986,905)	-3,502
99	(\$712,917,207)	(\$351,878,356)	(\$204,129,527)	(\$99,986,905)	-3,502
100	(\$779,923,095)	(\$380,189,954)	(\$214,663,427)	(\$85,452,402)	-3,421
101	(\$705,082,952)	(\$348,011,560)	(\$201,886,345)	(\$98,888,148)	-3,464
102	(\$779,923,095)	(\$380,189,954)	(\$214,663,427)	(\$85,452,402)	-3,421
103	(\$779,923,095)	(\$380,189,954)	(\$214,663,427)	(\$85,452,402)	-3,421
104	(\$779,923,095)	(\$380,189,954)	(\$214,663,427)	(\$85,452,402)	-3,421
105	(\$779,923,095)	(\$380,189,954)	(\$214,663,427)	(\$85,452,402)	-3,421
106	(\$413,847,135)	(\$198,350,327)	(\$117,178,157)	(\$60,451,881)	-2,056
107	(\$779,923,095)	(\$380,189,954)	(\$214,663,427)	(\$85,452,402)	-3,421
108	(\$779,923,095)	(\$380,189,954)	(\$214,663,427)	(\$85,452,402)	-3,421
109	(\$779,923,095)	(\$380,189,954)	(\$214,663,427)	(\$85,452,402)	-3,421
110	(\$779,923,095)	(\$380,189,954)	(\$214,663,427)	(\$85,452,402)	-3,421
111	(\$796,400,343)	(\$388,222,136)	(\$219,198,570)	(\$87,257,735)	-3,494
112	(\$779,923,095)	(\$380,189,954)	(\$214,663,427)	(\$85,452,402)	-3,421
113	(\$796,400,343)	(\$388,222,136)	(\$219,198,570)	(\$87,257,735)	-3,494
114	(\$796,400,343)	(\$388,222,136)	(\$219,198,570)	(\$87,257,735)	-3,494
115	(\$796,400,343)	(\$388,222,136)	(\$219,198,570)	(\$87,257,735)	-3,494
116	(\$739,250,185)	(\$370,937,670)	(\$220,936,812)	(\$113,416,835)	-3,946
117	(\$739,250,185)	(\$370,937,670)	(\$220,936,812)	(\$113,416,835)	-3,946
118	(\$739,250,185)	(\$370,937,670)	(\$220,936,812)	(\$113,416,835)	-3,946
119	(\$739,250,185)	(\$370,937,670)	(\$220,936,812)	(\$113,416,835)	-3,946
120	(\$739,250,185)	(\$370,937,670)	(\$220,936,812)	(\$113,416,835)	-3,946
121	(\$739,250,185)	(\$370,937,670)	(\$220,936,812)	(\$113,416,835)	-3,946
122	(\$739,250,185)	(\$370,937,670)	(\$220,936,812)	(\$113,416,835)	-3,946
123	(\$739,250,185)	(\$370,937,670)	(\$220,936,812)	(\$113,416,835)	-3,946
124	(\$739,250,185)	(\$370,937,670)	(\$220,936,812)	(\$113,416,835)	-3,946
125	(\$739,250,185)	(\$370,937,670)	(\$220,936,812)	(\$113,416,835)	-3,946
126	(\$794,884,483)	(\$361,647,383)	(\$203,595,925)	(\$73,754,680)	-3,084

**The Total Annual Impact of Mortality Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
Results by Texas House District**

House District	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
127	(\$794,884,483)	(\$361,647,383)	(\$203,595,925)	(\$73,754,680)	-3,084
128	(\$794,884,483)	(\$361,647,383)	(\$203,595,925)	(\$73,754,680)	-3,084
129	(\$794,884,483)	(\$361,647,383)	(\$203,595,925)	(\$73,754,680)	-3,084
130	(\$794,884,483)	(\$361,647,383)	(\$203,595,925)	(\$73,754,680)	-3,084
131	(\$794,884,483)	(\$361,647,383)	(\$203,595,925)	(\$73,754,680)	-3,084
132	(\$794,884,483)	(\$361,647,383)	(\$203,595,925)	(\$73,754,680)	-3,084
133	(\$794,884,483)	(\$361,647,383)	(\$203,595,925)	(\$73,754,680)	-3,084
134	(\$794,884,483)	(\$361,647,383)	(\$203,595,925)	(\$73,754,680)	-3,084
135	(\$794,884,483)	(\$361,647,383)	(\$203,595,925)	(\$73,754,680)	-3,084
136	(\$247,014,855)	(\$131,838,840)	(\$81,112,662)	(\$45,292,933)	-1,496
137	(\$775,958,662)	(\$353,036,731)	(\$198,748,403)	(\$71,998,616)	-3,011
138	(\$775,958,662)	(\$353,036,731)	(\$198,748,403)	(\$71,998,616)	-3,011
139	(\$775,958,662)	(\$353,036,731)	(\$198,748,403)	(\$71,998,616)	-3,011
140	(\$775,958,662)	(\$353,036,731)	(\$198,748,403)	(\$71,998,616)	-3,011
141	(\$794,884,483)	(\$361,647,383)	(\$203,595,925)	(\$73,754,680)	-3,084
142	(\$794,884,483)	(\$361,647,383)	(\$203,595,925)	(\$73,754,680)	-3,084
143	(\$794,884,483)	(\$361,647,383)	(\$203,595,925)	(\$73,754,680)	-3,084
144	(\$794,884,483)	(\$361,647,383)	(\$203,595,925)	(\$73,754,680)	-3,084
145	(\$794,884,483)	(\$361,647,383)	(\$203,595,925)	(\$73,754,680)	-3,084
146	(\$794,884,483)	(\$361,647,383)	(\$203,595,925)	(\$73,754,680)	-3,084
147	(\$775,958,662)	(\$353,036,731)	(\$198,748,403)	(\$71,998,616)	-3,011
148	(\$775,958,662)	(\$353,036,731)	(\$198,748,403)	(\$71,998,616)	-3,011
149	(\$775,958,662)	(\$353,036,731)	(\$198,748,403)	(\$71,998,616)	-3,011
150	(\$775,958,662)	(\$353,036,731)	(\$198,748,403)	(\$71,998,616)	-3,011
TOTAL	(\$109,202,315,491)	(\$53,451,021,915)	(\$30,958,962,479)	(\$15,877,753,533)	-538,418

NOTE: In cases in which a county was part of more than one district, allocations are based on the percentage of the population residing in a district. This convention is adopted because of a lack of subcounty data sufficient for allocation purposes. In some instances, this approach will result in districts which reflect the same proportion of a large urban county reporting identical results. Allocations reflect district maps as currently defined.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

**The Total Annual Impact of Mortality Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
Results by Texas Senate District**

Senate District	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
1	(\$5,196,411,220)	(\$2,592,805,752)	(\$1,495,869,142)	(\$855,524,724)	-26,904
2	(\$3,752,084,674)	(\$1,869,693,062)	(\$1,088,167,785)	(\$571,834,252)	-19,232
3	(\$5,197,528,516)	(\$2,629,254,717)	(\$1,554,273,523)	(\$934,258,982)	-28,743
4	(\$4,144,447,070)	(\$1,987,237,049)	(\$1,168,684,180)	(\$579,262,762)	-19,859
5	(\$2,181,806,785)	(\$1,123,544,660)	(\$665,610,962)	(\$400,395,696)	-12,448
6	(\$3,785,164,203)	(\$1,722,130,394)	(\$969,504,406)	(\$351,212,762)	-14,687
7	(\$3,785,164,203)	(\$1,722,130,394)	(\$969,504,406)	(\$351,212,762)	-14,687
8	(\$2,008,663,106)	(\$1,017,496,422)	(\$595,218,911)	(\$296,826,298)	-10,288
9	(\$3,652,281,617)	(\$1,796,641,266)	(\$1,034,790,318)	(\$481,897,395)	-17,422
10	(\$3,603,757,311)	(\$1,778,725,753)	(\$1,031,863,543)	(\$505,428,313)	-17,703
11	(\$3,960,140,619)	(\$1,839,869,020)	(\$1,063,715,243)	(\$540,247,324)	-18,166
12	(\$2,549,110,741)	(\$1,238,542,354)	(\$725,508,725)	(\$365,513,825)	-12,599
13	(\$3,517,302,376)	(\$1,604,563,601)	(\$903,138,238)	(\$337,700,840)	-13,785
14	(\$2,240,978,021)	(\$1,156,697,134)	(\$692,068,055)	(\$351,252,123)	-12,250
15	(\$3,595,905,993)	(\$1,636,023,874)	(\$921,029,186)	(\$333,652,124)	-13,952
16	(\$3,789,767,150)	(\$1,847,401,887)	(\$1,043,082,849)	(\$415,226,461)	-16,625
17	(\$3,337,245,617)	(\$1,533,533,041)	(\$867,530,314)	(\$355,524,596)	-13,595
18	(\$3,942,552,009)	(\$1,917,870,462)	(\$1,094,204,972)	(\$617,536,522)	-19,240
19	(\$3,359,937,646)	(\$1,693,526,445)	(\$996,876,086)	(\$554,121,798)	-18,196
20	(\$3,174,708,813)	(\$1,559,028,972)	(\$907,721,536)	(\$494,840,381)	-16,208
21	(\$2,558,620,396)	(\$1,292,732,785)	(\$742,024,419)	(\$448,796,417)	-13,655
22	(\$4,259,885,408)	(\$2,049,769,710)	(\$1,217,823,290)	(\$705,621,633)	-22,630
23	(\$3,789,767,150)	(\$1,847,401,887)	(\$1,043,082,849)	(\$415,226,461)	-16,625
24	(\$3,897,930,784)	(\$1,979,934,441)	(\$1,170,454,690)	(\$706,831,879)	-22,142
25	(\$3,131,967,780)	(\$1,557,451,639)	(\$921,911,336)	(\$508,657,388)	-16,860
26	(\$3,437,513,359)	(\$1,724,860,166)	(\$1,027,356,175)	(\$527,388,281)	-18,347
27	(\$2,108,944,959)	(\$1,090,544,219)	(\$648,194,823)	(\$383,599,326)	-12,392
28	(\$4,159,480,605)	(\$2,113,204,702)	(\$1,211,723,576)	(\$708,502,283)	-22,116
29	(\$3,328,181,826)	(\$1,611,780,952)	(\$941,959,452)	(\$495,880,242)	-17,010
30	(\$4,031,361,284)	(\$2,046,556,664)	(\$1,187,417,578)	(\$695,008,279)	-21,598
31	(\$3,723,704,248)	(\$1,870,068,491)	(\$1,058,651,909)	(\$588,771,406)	-18,457
TOTAL	(\$109,202,315,491)	(\$53,451,021,915)	(\$30,958,962,479)	(\$15,877,753,533)	-538,418

NOTE: In cases in which a county was part of more than one district, allocations are based on the percentage of the population residing in a district. This convention is adopted because of a lack of subcounty data sufficient for allocation purposes. In some instances, this approach will result in districts which reflect the same proportion of a large urban county reporting identical results. Allocations reflect district maps as currently defined.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

**The Total Annual Impact of Mortality Losses Associated with the Incidence
of Cancer on Business Activity in Texas:
Results by US Congressional District in Texas**

US Congressional District in Texas	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
1	(\$4,203,236,403)	(\$2,104,987,774)	(\$1,214,718,988)	(\$680,562,250)	-21,678
2	(\$3,217,389,573)	(\$1,463,810,835)	(\$824,078,745)	(\$298,530,848)	-12,484
3	(\$1,528,100,148)	(\$785,039,701)	(\$464,943,836)	(\$247,784,953)	-8,249
4	(\$3,668,988,330)	(\$1,858,985,183)	(\$1,115,440,738)	(\$708,304,050)	-21,324
5	(\$3,827,737,037)	(\$1,912,657,091)	(\$1,105,518,184)	(\$582,040,168)	-19,556
6	(\$3,088,162,678)	(\$1,506,759,990)	(\$881,087,663)	(\$457,812,636)	-15,443
7	(\$3,217,389,573)	(\$1,463,810,835)	(\$824,078,745)	(\$298,530,848)	-12,484
8	(\$3,417,036,151)	(\$1,652,627,083)	(\$949,839,565)	(\$475,482,403)	-16,254
9	(\$3,044,237,052)	(\$1,390,692,284)	(\$782,678,732)	(\$297,388,398)	-11,993
10	(\$2,903,799,150)	(\$1,403,416,522)	(\$810,391,145)	(\$390,413,386)	-13,749
11	(\$4,091,627,963)	(\$2,032,125,313)	(\$1,156,870,526)	(\$686,282,782)	-20,988
12	(\$3,100,391,434)	(\$1,517,965,256)	(\$878,650,575)	(\$448,107,789)	-15,261
13	(\$3,809,196,891)	(\$1,953,416,317)	(\$1,112,968,197)	(\$636,313,359)	-19,837
14	(\$4,024,042,785)	(\$1,927,268,307)	(\$1,157,382,106)	(\$658,359,034)	-20,806
15	(\$1,830,897,049)	(\$948,271,369)	(\$560,480,962)	(\$335,774,956)	-10,574
16	(\$2,860,387,682)	(\$1,384,338,969)	(\$809,108,793)	(\$423,825,862)	-14,593
17	(\$3,127,405,958)	(\$1,550,162,562)	(\$908,525,541)	(\$521,215,637)	-16,786
18	(\$3,217,389,573)	(\$1,463,810,835)	(\$824,078,745)	(\$298,530,848)	-12,484
19	(\$3,481,972,450)	(\$1,776,516,363)	(\$1,024,140,504)	(\$576,890,754)	-18,413
20	(\$3,030,925,757)	(\$1,520,844,447)	(\$905,840,929)	(\$465,009,022)	-16,177
21	(\$3,025,856,644)	(\$1,502,452,899)	(\$884,038,086)	(\$494,033,671)	-16,238
22	(\$2,174,008,614)	(\$1,019,159,314)	(\$580,452,566)	(\$290,531,770)	-9,661
23	(\$2,805,176,340)	(\$1,416,746,202)	(\$828,944,374)	(\$475,878,322)	-15,295
24	(\$2,927,073,112)	(\$1,431,254,658)	(\$820,029,998)	(\$364,634,537)	-13,580
25	(\$2,662,474,310)	(\$1,330,243,328)	(\$796,922,652)	(\$466,514,233)	-14,909
26	(\$2,011,697,722)	(\$973,221,484)	(\$571,509,440)	(\$289,804,376)	-9,953
27	(\$4,160,426,143)	(\$1,980,749,392)	(\$1,134,518,822)	(\$634,752,923)	-19,902
28	(\$2,021,562,606)	(\$1,038,232,775)	(\$602,153,366)	(\$350,043,545)	-11,082
29	(\$3,217,389,573)	(\$1,463,810,835)	(\$824,078,745)	(\$298,530,848)	-12,484
30	(\$3,229,540,702)	(\$1,574,307,695)	(\$888,887,993)	(\$353,845,158)	-14,167
31	(\$1,535,401,863)	(\$819,188,694)	(\$503,995,122)	(\$290,823,955)	-9,482
32	(\$3,112,862,043)	(\$1,520,135,958)	(\$859,763,951)	(\$346,478,662)	-13,760
33	(\$3,136,233,302)	(\$1,537,909,284)	(\$879,718,789)	(\$389,297,112)	-14,540
34	(\$2,260,236,339)	(\$1,160,657,392)	(\$682,020,437)	(\$412,818,783)	-12,969
35	(\$2,462,053,717)	(\$1,243,081,490)	(\$739,047,648)	(\$389,279,509)	-13,286
36	(\$3,770,008,822)	(\$1,822,363,479)	(\$1,052,057,272)	(\$543,326,149)	-17,980
TOTAL	(\$109,202,315,491)	(\$53,451,021,915)	(\$30,958,962,479)	(\$15,877,753,533)	-538,418

NOTE: In cases in which a county was part of more than one district, allocations are based on the percentage of the population residing in a district. This convention is adopted because of a lack of subcounty data sufficient for allocation purposes. In some instances, this approach will result in districts which reflect the same proportion of a large urban county reporting identical results. Allocations reflect district maps as currently defined.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

Total Annual Impact of Losses (Treatment, Morbidity, and Mortality) Associated with the Incidence of Cancer on Business Activity in Texas

**The Total Annual Impact of Losses (Treatment, Morbidity, and Mortality)
Associated with the Incidence of Cancer on Business Activity in Texas:
Results by Detailed Industrial Category**

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$2,920,566,202)	(\$845,950,145)	(\$526,100,968)	(9,120)
Mining	(\$15,417,935,444)	(\$6,999,852,093)	(\$2,457,269,990)	(10,179)
Construction	(\$6,893,134,321)	(\$3,390,630,689)	(\$2,605,723,322)	(39,506)
Nondurable Manufacturing	(\$24,259,201,751)	(\$6,738,624,489)	(\$3,542,355,624)	(41,641)
Durable Manufacturing	(\$10,876,076,748)	(\$4,489,316,819)	(\$3,005,191,477)	(31,089)
Transportation and Utilities	(\$20,235,843,935)	(\$7,008,983,931)	(\$4,005,794,972)	(43,718)
Information	(\$5,205,510,618)	(\$3,397,421,523)	(\$1,490,605,004)	(13,594)
Wholesale Trade	(\$7,074,783,343)	(\$5,336,529,553)	(\$3,014,181,626)	(34,712)
Retail Trade (including Restaurants)	(\$28,869,361,809)	(\$22,179,151,821)	(\$12,812,380,019)	(399,790)
FIRE	(\$41,425,982,273)	(\$12,776,270,387)	(\$4,779,637,865)	(47,380)
Business Services	(\$12,697,179,417)	(\$8,926,688,191)	(\$7,239,697,452)	(85,463)
Health Services	(\$15,430,983,308)	(\$11,809,908,432)	(\$9,758,015,955)	(164,455)
Other Services	(\$13,167,238,802)	(\$6,913,727,378)	(\$5,336,291,924)	(125,170)
TOTAL	(\$204,473,797,970)	(\$100,813,055,453)	(\$60,573,246,198)	(1,045,817)
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				

**The Total Annual Impact of Losses (Treatment, Morbidity, and Mortality)
Associated with the Incidence of Cancer on Business Activity in Texas:
Comptroller's Economic Region Results**

Economic Region	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
High Plains	(\$6,980,897,314)	(\$3,578,552,432)	(\$2,149,444,620)	(\$1,133,916,042)	-38,387
Northwest Texas	(\$6,363,886,163)	(\$3,287,142,859)	(\$1,947,202,445)	(\$1,068,566,044)	-34,895
Metroplex	(\$52,352,292,242)	(\$25,868,332,842)	(\$15,492,121,848)	(\$6,996,608,506)	-263,100
Upper East Texas	(\$12,746,909,251)	(\$6,457,718,396)	(\$3,892,592,308)	(\$2,095,229,067)	-70,037
Southeast Texas	(\$8,521,159,993)	(\$4,326,509,512)	(\$2,704,441,981)	(\$1,505,274,561)	-49,248
Gulf Coast	(\$51,331,868,056)	(\$23,867,007,325)	(\$14,078,201,302)	(\$5,598,962,094)	-225,364
Capital	(\$10,040,932,035)	(\$5,202,288,936)	(\$3,197,925,588)	(\$1,578,894,779)	-56,609
Central Texas	(\$9,244,065,091)	(\$4,698,831,098)	(\$2,879,371,179)	(\$1,585,115,856)	-53,384
Alamo	(\$21,032,378,842)	(\$10,562,654,734)	(\$6,442,297,042)	(\$3,222,169,379)	-114,809
South Texas	(\$14,290,993,755)	(\$7,249,295,929)	(\$4,394,162,297)	(\$2,365,561,397)	-80,080
West Texas	(\$5,138,999,483)	(\$2,562,764,713)	(\$1,494,295,228)	(\$802,883,887)	-26,160
Upper Rio Grande	(\$6,429,415,745)	(\$3,151,956,676)	(\$1,901,190,360)	(\$916,180,197)	-33,744
TOTAL STATE IMPACT	(\$204,473,797,970)	(\$100,813,055,453)	(\$60,573,246,198)	(\$28,869,361,809)	-1,045,817
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group					

**The Total Annual Impact of Losses (Treatment, Morbidity, and Mortality)
Associated with the Incidence of Cancer on Business Activity in Texas:
Council of Governments (COG) Region Results**

COG	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Panhandle	(\$3,668,153,630)	(\$1,856,262,181)	(\$1,099,072,348)	(\$586,580,628)	-19,467
South Plains	(\$3,312,743,685)	(\$1,722,290,251)	(\$1,050,372,273)	(\$547,335,414)	-18,920
Nortex	(\$2,591,210,281)	(\$1,362,200,986)	(\$807,272,009)	(\$442,819,823)	-14,415
North Central Texas	(\$50,212,733,459)	(\$24,763,474,766)	(\$14,803,614,798)	(\$6,610,685,770)	-250,386
Ark-Tex	(\$2,901,447,170)	(\$1,480,032,851)	(\$918,969,407)	(\$535,177,259)	-17,188
East Texas	(\$9,845,462,081)	(\$4,977,685,545)	(\$2,973,622,901)	(\$1,560,051,808)	-52,849
West Central Texas	(\$3,772,675,882)	(\$1,924,941,873)	(\$1,139,930,436)	(\$625,746,220)	-20,480
Rio Grande	(\$6,429,415,745)	(\$3,151,956,676)	(\$1,901,190,360)	(\$916,180,197)	-33,744
Permian Basin	(\$3,506,260,505)	(\$1,756,157,713)	(\$1,026,073,670)	(\$545,268,616)	-17,657
Concho Valley	(\$1,632,738,978)	(\$806,607,000)	(\$468,221,558)	(\$257,615,271)	-8,502
Heart of Texas	(\$3,925,066,546)	(\$1,921,581,885)	(\$1,164,735,912)	(\$628,087,625)	-21,493
Capital Area	(\$10,040,932,035)	(\$5,202,288,936)	(\$3,197,925,588)	(\$1,578,894,779)	-56,609
Brazos Valley	(\$2,261,430,167)	(\$1,161,353,785)	(\$700,327,827)	(\$390,022,174)	-12,827
Deep East Texas	(\$4,189,614,830)	(\$2,165,658,124)	(\$1,342,670,059)	(\$770,188,770)	-24,934
South East Texas	(\$4,331,545,164)	(\$2,160,851,388)	(\$1,361,771,921)	(\$735,085,791)	-24,315
Houston-Galveston Area	(\$51,331,868,056)	(\$23,867,007,325)	(\$14,078,201,302)	(\$5,598,962,094)	-225,364
Golden Crescent	(\$2,001,025,433)	(\$1,002,426,997)	(\$604,000,393)	(\$325,534,195)	-10,693
Alamo Area	(\$19,034,474,653)	(\$9,561,681,264)	(\$5,839,085,284)	(\$2,896,973,041)	-104,129
South Texas	(\$1,372,046,038)	(\$728,091,049)	(\$431,824,640)	(\$255,791,359)	-7,985
Coastal Bend	(\$5,878,875,764)	(\$2,816,019,064)	(\$1,670,063,736)	(\$872,627,810)	-29,191
Lower Rio Grande Valley	(\$5,956,380,936)	(\$3,131,177,689)	(\$1,940,678,338)	(\$1,030,528,399)	-36,210
Texoma	(\$2,139,558,783)	(\$1,104,858,076)	(\$688,507,051)	(\$385,922,736)	-12,713
Central Texas	(\$3,057,568,378)	(\$1,615,895,428)	(\$1,014,307,439)	(\$567,006,058)	-19,064
Middle Rio Grande	(\$1,080,569,773)	(\$572,554,598)	(\$350,806,948)	(\$206,275,972)	-6,682
Border Region	(\$14,844,133,359)	(\$7,587,079,946)	(\$4,626,549,060)	(\$2,409,838,036)	-84,656
TOTAL STATE IMPACT	(\$204,473,797,970)	(\$100,813,055,453)	(\$60,573,246,198)	(\$28,869,361,809)	-1,045,817

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

**The Total Annual Impact of Losses (Treatment, Morbidity, and Mortality)
Associated with the Incidence of Cancer on Business Activity in Texas:
Metropolitan Statistical Area (MSA) and Rural Texas Results**

MSA	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Abilene	(\$1,847,104,683)	(\$923,366,952)	(\$543,293,852)	(\$270,141,227)	-9,461
Amarillo	(\$2,383,099,375)	(\$1,238,968,878)	(\$737,547,734)	(\$373,456,856)	-13,020
Austin-Round Rock	(\$8,494,323,485)	(\$4,436,701,281)	(\$2,742,555,779)	(\$1,330,630,248)	-48,320
Beaumont-Port Arthur	(\$4,417,685,458)	(\$2,214,045,143)	(\$1,396,862,609)	(\$757,783,509)	-24,976
Brownsville-Harlingen	(\$2,406,971,716)	(\$1,227,963,074)	(\$757,016,879)	(\$403,850,486)	-14,190
College Station-Bryan	(\$1,426,838,441)	(\$727,440,374)	(\$438,366,614)	(\$235,323,962)	-7,975
Corpus Christi	(\$4,710,574,044)	(\$2,207,801,859)	(\$1,312,703,452)	(\$662,831,415)	-22,658
Dallas-Plano-Irving MD*	(\$30,555,882,429)	(\$15,022,544,303)	(\$8,922,494,675)	(\$3,793,967,328)	-148,212
Fort Worth-Arlington MD*	(\$18,438,457,321)	(\$9,130,200,616)	(\$5,507,198,720)	(\$2,609,190,228)	-95,239
El Paso	(\$6,269,247,740)	(\$3,067,689,420)	(\$1,849,317,537)	(\$885,368,908)	-32,769
Houston-The Woodlands-Sugar Land	(\$49,626,854,229)	(\$23,000,041,837)	(\$13,547,749,139)	(\$5,289,567,025)	-215,505
Killeen-Temple	(\$2,600,530,716)	(\$1,378,659,290)	(\$866,760,725)	(\$476,191,500)	-16,256
Laredo	(\$1,039,482,896)	(\$546,010,896)	(\$320,416,001)	(\$181,461,536)	-5,814
Longview	(\$2,473,715,409)	(\$1,273,226,975)	(\$766,253,116)	(\$392,600,042)	-13,391
Lubbock	(\$2,500,161,289)	(\$1,308,388,055)	(\$804,917,851)	(\$393,758,616)	-14,357
McAllen-Edinburg-Mission	(\$3,438,074,222)	(\$1,840,708,725)	(\$1,145,694,935)	(\$603,003,941)	-21,297
Midland	(\$1,035,188,123)	(\$524,403,255)	(\$304,154,905)	(\$152,444,978)	-5,113
Odessa	(\$1,290,637,542)	(\$643,312,403)	(\$383,979,583)	(\$195,576,550)	-6,549
San Angelo	(\$1,156,476,210)	(\$567,904,747)	(\$327,873,119)	(\$174,398,098)	-5,960
San Antonio-New Braunfels	(\$17,640,258,731)	(\$8,872,036,525)	(\$5,427,062,188)	(\$2,664,906,380)	-96,513
Sherman-Denison	(\$1,291,021,265)	(\$678,458,838)	(\$426,370,895)	(\$244,647,384)	-8,029
Texarkana	(\$977,888,760)	(\$518,286,805)	(\$323,903,795)	(\$179,588,403)	-6,007
Tyler	(\$2,395,967,822)	(\$1,187,472,488)	(\$688,395,205)	(\$344,608,994)	-11,970
Victoria	(\$1,051,795,545)	(\$521,874,569)	(\$312,093,000)	(\$160,540,846)	-5,355
Waco	(\$2,801,020,923)	(\$1,366,502,850)	(\$830,386,640)	(\$427,433,513)	-15,168
Wichita Falls	(\$1,612,712,420)	(\$867,146,608)	(\$514,986,853)	(\$272,365,836)	-9,105
Rural Area	(\$30,591,827,174)	(\$15,521,898,686)	(\$9,374,890,399)	(\$5,393,723,999)	-172,605
TOTAL STATE IMPACT	(\$204,473,797,970)	(\$100,813,055,453)	(\$60,573,246,198)	(\$28,869,361,809)	-1,045,817
*Metropolitan Division SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group					

**The Total Annual Impact of Losses (Treatment, Morbidity, and Mortality)
Associated with the Incidence of Cancer on Business Activity in Texas:
County Results**

County	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Anderson	(\$644,016,495)	(\$351,254,076)	(\$210,717,298)	(\$113,556,967)	-3,788
Andrews	(\$108,058,712)	(\$55,408,226)	(\$31,678,819)	(\$16,790,576)	-534
Angelina	(\$857,220,280)	(\$434,078,744)	(\$272,008,674)	(\$151,312,068)	-5,033
Aransas	(\$430,941,309)	(\$199,077,044)	(\$113,007,315)	(\$63,976,759)	-1,987
Archer	(\$69,503,253)	(\$35,524,863)	(\$19,917,390)	(\$12,034,972)	-364
Armstrong	(\$21,882,390)	(\$11,147,393)	(\$6,695,688)	(\$2,541,722)	-111
Atascosa	(\$404,697,772)	(\$196,774,611)	(\$116,375,722)	(\$59,135,723)	-1,994
Austin	(\$307,482,687)	(\$145,735,886)	(\$88,826,269)	(\$40,258,576)	-1,458
Bailey	(\$41,724,737)	(\$21,502,803)	(\$13,048,207)	(\$8,566,580)	-245
Bandera	(\$246,898,585)	(\$118,895,607)	(\$69,825,833)	(\$42,413,487)	-1,308
Bastrop	(\$617,609,758)	(\$304,569,987)	(\$185,062,520)	(\$106,555,365)	-3,461
Baylor	(\$73,965,937)	(\$39,491,317)	(\$23,805,657)	(\$13,388,305)	-434
Bee	(\$213,719,273)	(\$113,849,001)	(\$67,466,094)	(\$39,276,223)	-1,248
Bell	(\$1,946,551,228)	(\$1,044,972,009)	(\$661,706,641)	(\$355,123,544)	-12,307
Bexar	(\$14,116,904,880)	(\$7,148,898,208)	(\$4,392,243,907)	(\$2,067,752,085)	-77,212
Blanco	(\$95,982,034)	(\$46,073,905)	(\$27,351,401)	(\$15,957,474)	-518
Borden	(\$20,997,166)	(\$10,135,393)	(\$5,618,939)	(\$2,727,365)	-88
Bosque	(\$217,659,596)	(\$109,002,428)	(\$68,242,655)	(\$34,165,840)	-1,239
Bowie	(\$977,888,760)	(\$518,286,805)	(\$323,903,795)	(\$179,588,403)	-6,007
Brazoria	(\$2,199,808,209)	(\$1,053,344,201)	(\$639,959,355)	(\$358,093,418)	-11,378
Brazos	(\$1,045,456,665)	(\$531,599,466)	(\$319,437,608)	(\$160,136,995)	-5,742
Brewster	(\$74,002,229)	(\$40,773,604)	(\$25,650,374)	(\$13,852,114)	-475
Briscoe	(\$16,014,204)	(\$7,451,390)	(\$4,357,152)	(\$2,762,317)	-80
Brooks	(\$48,163,058)	(\$26,573,243)	(\$16,340,178)	(\$10,012,310)	-306
Brown	(\$394,958,593)	(\$216,284,825)	(\$135,938,429)	(\$85,582,094)	-2,664
Burleson	(\$194,915,861)	(\$102,957,047)	(\$61,236,688)	(\$36,746,855)	-1,107
Burnet	(\$514,607,311)	(\$248,914,918)	(\$148,593,026)	(\$81,566,655)	-2,697
Caldwell	(\$371,580,410)	(\$187,341,247)	(\$112,485,700)	(\$60,333,621)	-2,020
Calhoun	(\$137,207,771)	(\$56,539,339)	(\$33,462,714)	(\$18,092,634)	-572
Callahan	(\$184,466,756)	(\$89,598,746)	(\$51,434,792)	(\$29,583,635)	-928
Cameron	(\$2,406,971,716)	(\$1,227,963,074)	(\$757,016,879)	(\$403,850,486)	-14,190
Camp	(\$112,127,222)	(\$56,152,020)	(\$34,846,969)	(\$18,953,535)	-647
Carson	(\$27,249,846)	(\$11,286,498)	(\$5,607,763)	(\$2,117,942)	-88
Cass	(\$319,567,615)	(\$162,966,417)	(\$100,867,624)	(\$64,595,716)	-1,918
Castro	(\$30,256,717)	(\$14,432,200)	(\$8,696,514)	(\$5,949,770)	-170
Chambers	(\$262,225,393)	(\$110,928,861)	(\$62,165,417)	(\$28,457,954)	-1,005
Cherokee	(\$447,061,478)	(\$229,141,996)	(\$146,206,483)	(\$82,136,461)	-2,705
Childress	(\$71,419,774)	(\$36,134,621)	(\$21,748,888)	(\$13,708,027)	-418
Clay	(\$119,575,731)	(\$60,876,025)	(\$37,703,102)	(\$18,241,259)	-650
Cochran	(\$20,445,260)	(\$10,720,955)	(\$5,804,522)	(\$2,714,014)	-97
Coke	(\$64,946,786)	(\$31,453,758)	(\$18,100,602)	(\$10,362,150)	-311
Coleman	(\$143,235,311)	(\$74,359,510)	(\$43,405,558)	(\$24,412,361)	-780
Collin	(\$3,707,745,636)	(\$1,913,607,679)	(\$1,174,039,987)	(\$577,945,645)	-20,524

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Collingsworth	(\$35,392,605)	(\$19,414,112)	(\$11,945,164)	(\$7,289,782)	-217
Colorado	(\$247,531,936)	(\$126,552,603)	(\$76,720,124)	(\$46,339,298)	-1,496
Comal	(\$989,902,722)	(\$486,576,477)	(\$294,253,382)	(\$165,483,905)	-5,593
Comanche	(\$170,376,393)	(\$87,670,462)	(\$54,571,579)	(\$30,578,170)	-1,010
Concho	(\$26,564,547)	(\$14,303,551)	(\$9,310,500)	(\$4,615,685)	-171
Cooke	(\$452,553,948)	(\$224,284,372)	(\$134,411,802)	(\$70,490,018)	-2,305
Coryell	(\$426,752,614)	(\$218,055,677)	(\$133,893,822)	(\$78,489,350)	-2,566
Cottle	(\$21,465,497)	(\$12,413,654)	(\$7,694,679)	(\$3,744,920)	-131
Crane	(\$23,197,962)	(\$12,609,193)	(\$7,277,040)	(\$3,445,318)	-125
Crockett	(\$28,559,717)	(\$14,657,654)	(\$8,299,738)	(\$6,183,021)	-159
Crosby	(\$56,294,097)	(\$30,630,703)	(\$18,198,448)	(\$7,594,517)	-310
Culberson	(\$15,342,151)	(\$9,032,472)	(\$5,490,315)	(\$4,345,678)	-113
Dallam	(\$34,724,136)	(\$18,356,107)	(\$11,093,165)	(\$5,621,149)	-201
Dallas	(\$20,305,457,784)	(\$9,915,138,507)	(\$5,791,415,049)	(\$2,189,550,741)	-92,585
Dawson	(\$130,526,700)	(\$65,262,921)	(\$36,544,476)	(\$22,510,582)	-659
Deaf Smith	(\$81,748,268)	(\$39,730,054)	(\$23,881,537)	(\$11,960,305)	-432
Delta	(\$50,680,155)	(\$26,572,832)	(\$16,716,698)	(\$6,063,913)	-280
Denton	(\$3,419,716,125)	(\$1,661,755,772)	(\$1,013,713,834)	(\$481,560,547)	-17,594
DeWitt	(\$269,024,559)	(\$136,882,220)	(\$84,505,771)	(\$46,822,261)	-1,555
Dickens	(\$31,513,371)	(\$16,558,804)	(\$10,180,985)	(\$6,086,792)	-183
Dimmit	(\$61,156,154)	(\$32,023,387)	(\$19,046,416)	(\$12,366,042)	-363
Donley	(\$44,820,685)	(\$25,368,657)	(\$16,003,261)	(\$10,858,937)	-321
Duval	(\$101,701,033)	(\$50,130,277)	(\$28,720,925)	(\$14,411,280)	-506
Eastland	(\$254,517,761)	(\$126,628,220)	(\$74,060,599)	(\$45,821,030)	-1,373
Ector	(\$1,290,637,542)	(\$643,312,403)	(\$383,979,583)	(\$195,576,550)	-6,549
Edwards	(\$22,123,834)	(\$10,851,451)	(\$5,938,609)	(\$3,837,491)	-108
El Paso	(\$6,262,354,595)	(\$3,064,173,953)	(\$1,847,293,357)	(\$883,277,031)	-32,725
Ellis	(\$1,074,492,824)	(\$502,234,402)	(\$304,838,892)	(\$175,035,529)	-5,527
Erath	(\$282,099,629)	(\$153,490,872)	(\$97,169,241)	(\$58,826,517)	-1,885
Falls	(\$195,868,402)	(\$104,556,434)	(\$65,947,526)	(\$35,837,635)	-1,230
Fannin	(\$395,983,570)	(\$202,114,866)	(\$127,724,354)	(\$70,785,334)	-2,379
Fayette	(\$375,030,996)	(\$191,980,202)	(\$113,153,404)	(\$56,110,998)	-1,985
Fisher	(\$46,702,683)	(\$24,565,328)	(\$14,943,451)	(\$9,391,868)	-287
Floyd	(\$42,124,033)	(\$19,195,571)	(\$11,414,826)	(\$5,514,188)	-202
Foard	(\$6,824,073)	(\$3,861,645)	(\$2,538,637)	(\$1,251,228)	-47
Fort Bend	(\$3,289,420,408)	(\$1,547,673,068)	(\$905,143,522)	(\$430,305,196)	-15,002
Franklin	(\$110,027,066)	(\$55,074,327)	(\$31,473,878)	(\$18,594,335)	-576
Freestone	(\$224,103,509)	(\$111,070,371)	(\$63,193,947)	(\$40,793,843)	-1,167
Frio	(\$127,016,307)	(\$61,941,986)	(\$35,590,669)	(\$19,616,169)	-633
Gaines	(\$95,386,040)	(\$45,463,870)	(\$24,652,409)	(\$14,285,376)	-428
Galveston	(\$3,303,468,740)	(\$1,566,767,989)	(\$948,521,535)	(\$496,633,622)	-16,890
Garza	(\$47,583,813)	(\$23,072,768)	(\$13,113,407)	(\$7,964,471)	-230
Gillespie	(\$351,864,596)	(\$174,561,246)	(\$107,355,938)	(\$59,806,716)	-2,008

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Glasscock	(\$2,741,423)	(\$1,288,413)	(\$671,136)	(\$232,968)	-10
Goliad	(\$77,524,780)	(\$41,615,972)	(\$24,931,563)	(\$16,887,355)	-475
Gonzales	(\$138,209,066)	(\$71,248,674)	(\$44,292,322)	(\$25,449,488)	-830
Gray	(\$294,614,018)	(\$139,783,599)	(\$82,561,695)	(\$46,616,318)	-1,429
Grayson	(\$1,291,021,265)	(\$678,458,838)	(\$426,370,895)	(\$244,647,384)	-8,029
Gregg	(\$1,446,720,329)	(\$765,180,157)	(\$463,244,395)	(\$228,585,624)	-8,022
Grimes	(\$197,751,210)	(\$100,221,378)	(\$61,141,043)	(\$34,988,714)	-1,119
Guadalupe	(\$835,718,082)	(\$414,456,245)	(\$251,946,003)	(\$155,099,293)	-4,740
Hale	(\$207,719,280)	(\$112,315,501)	(\$70,270,590)	(\$47,370,880)	-1,387
Hall	(\$43,525,703)	(\$22,075,701)	(\$13,130,857)	(\$7,802,115)	-244
Hamilton	(\$103,798,507)	(\$52,054,007)	(\$32,425,812)	(\$20,913,311)	-630
Hansford	(\$26,236,329)	(\$11,565,559)	(\$5,867,017)	(\$2,724,572)	-88
Hardeman	(\$40,037,620)	(\$21,944,752)	(\$13,403,974)	(\$10,022,826)	-274
Hardin	(\$566,078,246)	(\$279,687,657)	(\$165,538,611)	(\$98,598,097)	-3,009
Harris	(\$35,132,472,489)	(\$16,086,973,150)	(\$9,425,164,862)	(\$3,246,054,009)	-144,721
Harrison	(\$801,151,136)	(\$376,117,950)	(\$224,290,121)	(\$101,811,905)	-3,688
Hartley	(\$12,090,945)	(\$5,912,835)	(\$3,498,633)	(\$2,106,618)	-69
Haskell	(\$78,617,361)	(\$40,794,843)	(\$24,784,977)	(\$13,172,237)	-443
Hays	(\$790,894,621)	(\$404,899,770)	(\$249,040,670)	(\$133,638,044)	-4,564
Hemphill	(\$17,733,393)	(\$8,306,386)	(\$4,496,855)	(\$2,282,831)	-73
Henderson	(\$1,202,950,651)	(\$589,967,466)	(\$353,532,852)	(\$191,508,530)	-6,488
Hidalgo	(\$3,438,074,222)	(\$1,840,708,725)	(\$1,145,694,935)	(\$603,003,941)	-21,297
Hill	(\$438,324,439)	(\$207,859,714)	(\$124,493,031)	(\$78,903,716)	-2,474
Hockley	(\$166,269,598)	(\$85,357,822)	(\$49,887,537)	(\$29,548,323)	-917
Hood	(\$657,028,362)	(\$316,989,623)	(\$194,591,375)	(\$110,560,289)	-3,613
Hopkins	(\$328,061,935)	(\$171,432,640)	(\$106,747,277)	(\$67,672,476)	-2,040
Houston	(\$358,183,657)	(\$176,849,995)	(\$110,702,132)	(\$46,684,443)	-1,831
Howard	(\$383,085,439)	(\$186,099,417)	(\$109,734,547)	(\$58,650,881)	-1,908
Hudspeth	(\$6,893,145)	(\$3,515,467)	(\$2,024,181)	(\$2,091,877)	-45
Hunt	(\$756,690,774)	(\$383,611,833)	(\$238,432,248)	(\$147,503,811)	-4,539
Hutchinson	(\$233,737,843)	(\$108,872,558)	(\$62,624,188)	(\$43,113,247)	-1,107
Irion	(\$9,918,147)	(\$4,065,793)	(\$2,171,979)	(\$1,252,479)	-35
Jack	(\$93,211,331)	(\$46,361,301)	(\$26,962,998)	(\$15,869,386)	-473
Jackson	(\$142,145,244)	(\$73,123,262)	(\$41,171,695)	(\$26,078,990)	-750
Jasper	(\$392,780,572)	(\$203,016,459)	(\$126,310,427)	(\$77,088,675)	-2,429
Jeff Davis	(\$24,669,390)	(\$12,350,883)	(\$7,550,210)	(\$4,283,926)	-140
Jefferson	(\$2,858,331,388)	(\$1,431,581,714)	(\$914,438,455)	(\$475,041,939)	-16,215
Jim Hogg	(\$52,241,211)	(\$26,342,065)	(\$14,632,009)	(\$10,539,215)	-272
Jim Wells	(\$304,090,674)	(\$168,461,725)	(\$99,778,739)	(\$57,628,619)	-1,827
Johnson	(\$1,282,486,243)	(\$640,560,688)	(\$403,892,037)	(\$218,531,251)	-7,389
Jones	(\$219,841,760)	(\$111,857,656)	(\$66,275,794)	(\$33,388,015)	-1,172
Karnes	(\$184,703,173)	(\$85,488,330)	(\$49,197,844)	(\$26,569,427)	-848
Kaufman	(\$851,208,936)	(\$420,416,075)	(\$260,419,521)	(\$147,535,359)	-4,882

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Kendall	(\$342,132,347)	(\$160,126,594)	(\$95,198,905)	(\$53,437,544)	-1,715
Kenedy	(\$8,332,799)	(\$4,165,424)	(\$2,279,313)	(\$1,824,679)	-48
Kent	(\$7,675,488)	(\$3,637,443)	(\$2,062,139)	(\$1,091,911)	-34
Kerr	(\$727,510,601)	(\$366,199,650)	(\$219,090,009)	(\$125,736,493)	-4,114
Kimble	(\$74,668,763)	(\$32,919,412)	(\$18,585,856)	(\$11,540,446)	-337
King	(\$8,073,368)	(\$4,108,997)	(\$2,502,145)	(\$976,207)	-41
Kinney	(\$46,391,162)	(\$21,920,617)	(\$11,910,211)	(\$7,179,971)	-218
Kleberg	(\$271,302,350)	(\$137,985,817)	(\$81,334,794)	(\$44,612,616)	-1,469
Knox	(\$47,735,401)	(\$25,223,253)	(\$14,634,081)	(\$6,749,180)	-244
La Salle	(\$36,051,517)	(\$19,484,229)	(\$11,406,610)	(\$7,514,490)	-222
Lamar	(\$551,723,698)	(\$276,916,848)	(\$174,133,832)	(\$104,240,197)	-3,341
Lamb	(\$91,398,288)	(\$42,659,219)	(\$25,944,208)	(\$15,339,586)	-464
Lampasas	(\$227,226,874)	(\$115,631,604)	(\$71,160,261)	(\$42,578,606)	-1,384
Lavaca	(\$262,643,248)	(\$142,758,934)	(\$88,474,891)	(\$48,549,976)	-1,630
Lee	(\$171,376,046)	(\$86,254,766)	(\$50,713,075)	(\$27,483,834)	-896
Leon	(\$157,549,397)	(\$83,448,878)	(\$48,368,053)	(\$33,555,965)	-918
Liberty	(\$835,528,500)	(\$432,127,863)	(\$261,930,235)	(\$134,327,168)	-4,593
Limestone	(\$243,958,079)	(\$127,146,523)	(\$78,419,639)	(\$46,790,713)	-1,445
Lipscomb	(\$25,807,792)	(\$12,088,154)	(\$6,367,032)	(\$2,978,214)	-104
Live Oak	(\$140,562,015)	(\$67,026,252)	(\$39,470,207)	(\$23,987,479)	-703
Llano	(\$389,612,162)	(\$192,363,864)	(\$115,558,904)	(\$67,145,571)	-2,193
Loving	(\$4,568,286)	(\$2,035,694)	(\$930,205)	(\$336,767)	-13
Lubbock	(\$2,409,289,256)	(\$1,260,879,409)	(\$776,712,151)	(\$382,300,867)	-13,883
Lynn	(\$34,577,937)	(\$16,877,943)	(\$10,007,252)	(\$3,863,231)	-165
Madison	(\$112,745,973)	(\$58,128,089)	(\$34,343,354)	(\$23,411,131)	-680
Marion	(\$156,036,239)	(\$80,138,779)	(\$48,286,918)	(\$29,263,913)	-929
Martin	(\$40,567,963)	(\$19,407,523)	(\$11,181,643)	(\$5,601,251)	-185
Mason	(\$64,340,340)	(\$31,993,293)	(\$18,200,136)	(\$10,187,945)	-330
Matagorda	(\$389,267,956)	(\$179,505,190)	(\$107,841,246)	(\$68,159,577)	-1,958
Maverick	(\$275,534,098)	(\$142,448,098)	(\$85,884,964)	(\$52,457,345)	-1,665
McCulloch	(\$104,821,820)	(\$54,799,681)	(\$34,309,585)	(\$19,550,294)	-632
McLennan	(\$2,605,152,521)	(\$1,261,946,416)	(\$764,439,114)	(\$391,595,878)	-13,938
McMullen	(\$3,121,244)	(\$1,453,528)	(\$788,635)	(\$337,856)	-12
Medina	(\$357,101,901)	(\$172,652,874)	(\$102,290,140)	(\$60,446,160)	-1,945
Menard	(\$31,923,026)	(\$16,577,868)	(\$9,377,214)	(\$6,183,021)	-172
Midland	(\$994,620,161)	(\$504,995,733)	(\$292,973,262)	(\$146,843,727)	-4,928
Milam	(\$242,374,934)	(\$122,677,149)	(\$75,851,840)	(\$45,012,250)	-1,410
Mills	(\$46,459,051)	(\$28,006,401)	(\$18,184,038)	(\$11,180,969)	-351
Mitchell	(\$98,461,202)	(\$51,325,469)	(\$30,355,186)	(\$17,224,331)	-542
Montague	(\$295,579,816)	(\$145,157,719)	(\$83,384,590)	(\$47,647,857)	-1,530
Montgomery	(\$3,973,711,188)	(\$1,913,943,644)	(\$1,135,647,763)	(\$503,619,182)	-18,956
Moore	(\$132,730,273)	(\$57,695,625)	(\$32,839,297)	(\$18,112,873)	-556
Morris	(\$145,500,626)	(\$64,367,287)	(\$39,686,312)	(\$16,867,459)	-655

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Motley	(\$20,400,579)	(\$9,741,375)	(\$5,413,692)	(\$3,169,852)	-98
Nacogdoches	(\$519,227,643)	(\$278,163,130)	(\$176,073,763)	(\$105,936,952)	-3,449
Navarro	(\$541,449,557)	(\$270,779,589)	(\$168,349,632)	(\$87,356,329)	-3,096
Newton	(\$86,140,294)	(\$53,193,755)	(\$35,090,688)	(\$22,697,717)	-661
Nolan	(\$206,324,420)	(\$108,600,855)	(\$63,424,150)	(\$35,130,274)	-1,133
Nueces	(\$3,625,344,708)	(\$1,698,940,618)	(\$1,013,659,120)	(\$487,735,083)	-17,279
Ochiltree	(\$52,997,382)	(\$25,224,694)	(\$14,114,803)	(\$7,473,516)	-236
Oldham	(\$3,692,904)	(\$2,048,894)	(\$1,287,775)	(\$1,120,507)	-29
Orange	(\$907,135,531)	(\$449,582,016)	(\$281,794,855)	(\$161,445,755)	-5,091
Palo Pinto	(\$394,844,523)	(\$186,459,386)	(\$108,402,529)	(\$61,345,368)	-1,955
Panola	(\$278,474,039)	(\$141,714,881)	(\$84,339,691)	(\$45,148,989)	-1,488
Parker	(\$1,047,038,456)	(\$491,594,993)	(\$291,150,039)	(\$162,026,918)	-5,261
Parmer	(\$24,548,339)	(\$11,076,840)	(\$6,608,455)	(\$2,131,388)	-110
Pecos	(\$114,323,014)	(\$57,303,538)	(\$32,893,531)	(\$21,067,914)	-615
Polk	(\$741,150,981)	(\$382,412,916)	(\$226,396,778)	(\$133,114,275)	-4,071
Potter	(\$1,315,493,564)	(\$686,781,610)	(\$406,752,034)	(\$200,603,737)	-7,099
Presidio	(\$46,154,235)	(\$22,110,297)	(\$13,181,923)	(\$8,329,570)	-247
Rains	(\$135,238,878)	(\$62,748,734)	(\$35,446,998)	(\$24,454,806)	-663
Randall	(\$1,014,780,671)	(\$527,704,484)	(\$317,204,475)	(\$167,072,947)	-5,693
Reagan	(\$19,699,915)	(\$10,096,545)	(\$5,536,380)	(\$3,806,342)	-97
Real	(\$60,371,736)	(\$27,970,938)	(\$15,989,601)	(\$9,021,595)	-283
Red River	(\$201,197,229)	(\$97,723,669)	(\$58,501,720)	(\$33,454,995)	-1,088
Reeves	(\$102,305,433)	(\$52,423,712)	(\$30,248,800)	(\$21,233,033)	-577
Refugio	(\$80,430,518)	(\$40,025,466)	(\$21,970,033)	(\$18,043,189)	-426
Roberts	(\$4,679,959)	(\$2,097,125)	(\$1,140,284)	(\$941,581)	-21
Robertson	(\$186,465,915)	(\$92,883,861)	(\$57,692,318)	(\$38,440,111)	-1,126
Rockwall	(\$440,570,350)	(\$225,780,035)	(\$139,635,146)	(\$74,835,696)	-2,560
Runnels	(\$160,042,489)	(\$72,332,949)	(\$41,016,570)	(\$22,679,725)	-718
Rusk	(\$560,802,202)	(\$273,870,590)	(\$164,188,213)	(\$83,459,510)	-2,861
Sabine	(\$137,340,733)	(\$68,840,403)	(\$44,404,984)	(\$26,082,810)	-826
San Augustine	(\$133,172,874)	(\$64,806,640)	(\$37,796,938)	(\$20,952,549)	-688
San Jacinto	(\$280,229,308)	(\$138,058,927)	(\$83,945,099)	(\$50,279,247)	-1,576
San Patricio	(\$654,288,027)	(\$309,784,197)	(\$186,037,018)	(\$111,119,574)	-3,391
San Saba	(\$64,405,169)	(\$34,498,580)	(\$21,085,024)	(\$13,708,027)	-416
Schleicher	(\$17,416,311)	(\$9,031,887)	(\$5,412,751)	(\$1,897,095)	-89
Scurry	(\$143,995,132)	(\$77,973,430)	(\$44,292,981)	(\$29,554,458)	-822
Shackelford	(\$35,631,572)	(\$17,887,647)	(\$9,966,136)	(\$5,608,528)	-175
Shelby	(\$213,936,958)	(\$115,622,680)	(\$75,499,171)	(\$44,585,175)	-1,438
Sherman	(\$7,534,947)	(\$3,408,372)	(\$1,966,763)	(\$1,041,811)	-36
Smith	(\$2,395,967,822)	(\$1,187,472,488)	(\$688,395,205)	(\$344,608,994)	-11,970
Somervell	(\$43,943,428)	(\$20,788,954)	(\$13,214,577)	(\$4,856,200)	-231
Starr	(\$215,038,575)	(\$121,789,266)	(\$76,649,502)	(\$50,609,486)	-1,517
Stephens	(\$106,064,864)	(\$57,388,290)	(\$33,535,569)	(\$22,548,388)	-618

**The Total Annual Impact of Losses (Treatment, Morbidity, and Mortality)
Associated with the Incidence of Cancer on Business Activity in Texas:
County Results**

County	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
Sterling	(\$4,712,155)	(\$2,683,693)	(\$1,624,324)	(\$1,201,049)	-31
Stonewall	(\$17,603,556)	(\$9,846,612)	(\$5,795,945)	(\$3,825,923)	-109
Sutton	(\$38,609,386)	(\$20,184,913)	(\$11,591,354)	(\$7,690,125)	-214
Swisher	(\$43,756,410)	(\$20,203,644)	(\$12,069,191)	(\$6,807,343)	-223
Tarrant	(\$14,943,518,903)	(\$7,420,084,479)	(\$4,464,385,525)	(\$2,032,175,822)	-76,244
Taylor	(\$1,442,796,167)	(\$721,910,550)	(\$425,583,266)	(\$207,169,576)	-7,361
Terrell	(\$5,720,866)	(\$3,299,934)	(\$2,048,773)	(\$1,062,108)	-35
Terry	(\$92,669,117)	(\$47,364,513)	(\$25,845,895)	(\$18,423,346)	-478
Throckmorton	(\$13,628,971)	(\$7,055,782)	(\$3,849,235)	(\$2,234,513)	-67
Titus	(\$216,800,086)	(\$106,692,026)	(\$66,938,271)	(\$44,099,766)	-1,283
Tom Green	(\$1,146,558,063)	(\$563,838,954)	(\$325,701,139)	(\$173,145,619)	-5,924
Travis	(\$5,350,238,802)	(\$2,810,962,277)	(\$1,736,203,514)	(\$788,287,610)	-29,945
Trinity	(\$224,501,880)	(\$122,698,690)	(\$74,905,306)	(\$45,044,832)	-1,442
Tyler	(\$245,729,649)	(\$127,915,785)	(\$79,536,099)	(\$46,410,027)	-1,489
Upshur	(\$466,192,877)	(\$234,176,228)	(\$138,820,509)	(\$80,554,908)	-2,508
Upton	(\$25,595,114)	(\$12,899,204)	(\$7,227,341)	(\$3,762,029)	-123
Uvalde	(\$229,392,017)	(\$120,154,143)	(\$73,977,381)	(\$41,113,566)	-1,398
Val Verde	(\$299,234,282)	(\$167,871,526)	(\$106,962,922)	(\$58,816,001)	-2,010
Van Zandt	(\$536,790,133)	(\$302,755,541)	(\$185,580,560)	(\$110,282,630)	-3,536
Victoria	(\$974,270,765)	(\$480,258,597)	(\$287,161,436)	(\$143,653,490)	-4,880
Walker	(\$618,537,896)	(\$324,525,968)	(\$204,947,503)	(\$114,228,701)	-3,843
Waller	(\$322,736,614)	(\$142,547,174)	(\$80,390,180)	(\$51,817,900)	-1,501
Ward	(\$102,377,695)	(\$52,528,868)	(\$30,280,281)	(\$19,901,564)	-558
Washington	(\$366,545,146)	(\$192,115,066)	(\$118,108,763)	(\$62,742,401)	-2,136
Webb	(\$1,039,482,896)	(\$546,010,896)	(\$320,416,001)	(\$181,461,536)	-5,814
Wharton	(\$449,676,039)	(\$236,381,727)	(\$140,943,290)	(\$80,667,493)	-2,562
Wheeler	(\$50,684,533)	(\$28,095,067)	(\$16,513,861)	(\$10,841,057)	-312
Wichita	(\$1,423,633,436)	(\$770,745,720)	(\$457,366,361)	(\$242,089,605)	-8,090
Wilbarger	(\$179,791,564)	(\$87,782,576)	(\$54,721,769)	(\$31,586,097)	-1,006
Willacy	(\$111,334,997)	(\$62,505,889)	(\$37,966,525)	(\$23,673,972)	-723
Williamson	(\$1,363,999,894)	(\$728,928,000)	(\$459,763,375)	(\$241,815,608)	-8,331
Wilson	(\$346,902,442)	(\$173,655,908)	(\$104,928,297)	(\$61,138,185)	-2,005
Winkler	(\$61,550,989)	(\$31,683,672)	(\$18,132,886)	(\$11,240,605)	-323
Wise	(\$464,441,929)	(\$240,181,878)	(\$139,965,167)	(\$81,039,749)	-2,502
Wood	(\$661,932,578)	(\$326,994,638)	(\$195,726,690)	(\$105,725,036)	-3,556
Yoakum	(\$42,660,952)	(\$21,303,870)	(\$12,028,408)	(\$7,902,561)	-219
Young	(\$267,622,023)	(\$138,041,414)	(\$79,772,852)	(\$46,943,369)	-1,416
Zapata	(\$65,283,355)	(\$33,948,822)	(\$20,127,128)	(\$13,181,122)	-381
Zavala	(\$50,314,973)	(\$29,830,210)	(\$19,690,236)	(\$13,969,473)	-414
TOTAL STATE IMPACT	(\$204,473,797,970)	(\$100,813,055,453)	(\$60,573,246,198)	(\$28,869,361,809)	-1,045,817
NOTE: Allocations reflect best available evidence regarding incidence and industrial structure and composition of each area. SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group					

**The Total Annual Impact of Losses (Treatment, Morbidity, and Mortality)
Associated with the Incidence of Cancer on Business Activity in Texas:
Results by Texas House District**

House District	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
1	(\$1,840,836,753)	(\$948,001,649)	(\$588,013,225)	(\$335,877,929)	-11,013
2	(\$1,621,542,842)	(\$857,800,014)	(\$530,760,084)	(\$325,458,918)	-10,115
3	(\$1,379,743,790)	(\$651,656,183)	(\$382,472,485)	(\$185,780,602)	-6,544
4	(\$1,849,657,976)	(\$910,089,072)	(\$553,851,788)	(\$306,487,439)	-10,267
5	(\$1,846,631,667)	(\$901,948,102)	(\$537,860,089)	(\$292,806,761)	-9,677
6	(\$1,820,935,545)	(\$902,479,091)	(\$523,180,356)	(\$261,902,835)	-9,097
7	(\$1,912,913,207)	(\$999,356,385)	(\$602,064,903)	(\$309,140,532)	-10,530
8	(\$1,847,894,000)	(\$940,963,750)	(\$566,753,908)	(\$320,610,855)	-10,525
9	(\$1,906,506,721)	(\$945,401,111)	(\$577,688,509)	(\$311,488,508)	-10,287
10	(\$1,278,994,435)	(\$602,528,871)	(\$364,939,476)	(\$207,591,979)	-6,630
11	(\$1,527,091,323)	(\$781,175,716)	(\$486,468,458)	(\$271,532,922)	-9,015
12	(\$1,575,111,218)	(\$788,226,657)	(\$482,501,234)	(\$264,169,142)	-8,901
13	(\$1,951,901,085)	(\$1,002,321,116)	(\$607,661,183)	(\$325,736,819)	-10,931
14	(\$878,183,599)	(\$446,543,552)	(\$268,327,591)	(\$134,515,076)	-4,823
15	(\$1,458,352,006)	(\$702,417,317)	(\$416,782,729)	(\$184,828,240)	-6,957
16	(\$1,458,352,006)	(\$702,417,317)	(\$416,782,729)	(\$184,828,240)	-6,957
17	(\$1,483,478,453)	(\$734,903,004)	(\$441,751,460)	(\$246,391,734)	-8,055
18	(\$1,734,295,704)	(\$894,712,758)	(\$550,822,837)	(\$298,835,116)	-10,012
19	(\$2,031,879,742)	(\$1,046,226,573)	(\$632,872,603)	(\$377,908,791)	-11,660
20	(\$1,057,062,222)	(\$531,956,227)	(\$325,592,808)	(\$179,778,339)	-5,939
21	(\$1,936,134,830)	(\$964,951,433)	(\$610,992,699)	(\$332,460,853)	-10,929
22	(\$1,829,332,088)	(\$916,212,297)	(\$585,240,611)	(\$304,026,841)	-10,378
23	(\$1,715,751,638)	(\$800,306,776)	(\$479,514,893)	(\$246,976,748)	-8,437
24	(\$1,849,942,494)	(\$877,390,074)	(\$531,172,060)	(\$278,114,828)	-9,459
25	(\$1,357,183,568)	(\$642,976,639)	(\$389,423,363)	(\$225,720,681)	-6,964
26	(\$894,722,351)	(\$420,967,075)	(\$246,199,038)	(\$117,043,013)	-4,081
27	(\$894,722,351)	(\$420,967,075)	(\$246,199,038)	(\$117,043,013)	-4,081
28	(\$894,722,351)	(\$420,967,075)	(\$246,199,038)	(\$117,043,013)	-4,081
29	(\$1,231,892,597)	(\$589,872,753)	(\$358,377,239)	(\$200,532,314)	-6,372
30	(\$1,969,399,702)	(\$954,398,638)	(\$565,038,832)	(\$307,475,689)	-9,896
31	(\$1,121,244,221)	(\$576,244,785)	(\$344,629,626)	(\$202,046,490)	-6,303
32	(\$1,776,418,907)	(\$832,480,903)	(\$496,692,969)	(\$238,990,191)	-8,467
33	(\$885,499,826)	(\$455,412,957)	(\$280,519,944)	(\$144,189,174)	-5,023
34	(\$1,848,925,801)	(\$866,459,715)	(\$516,966,151)	(\$248,744,892)	-8,812
35	(\$849,258,692)	(\$444,364,439)	(\$275,341,821)	(\$145,839,087)	-5,138
36	(\$749,500,180)	(\$401,274,502)	(\$249,761,496)	(\$131,454,859)	-4,643
37	(\$1,010,928,121)	(\$515,744,491)	(\$317,947,089)	(\$169,617,204)	-5,960
38	(\$986,858,404)	(\$503,464,860)	(\$310,376,920)	(\$165,578,699)	-5,818
39	(\$749,500,180)	(\$401,274,502)	(\$249,761,496)	(\$131,454,859)	-4,643
40	(\$749,500,180)	(\$401,274,502)	(\$249,761,496)	(\$131,454,859)	-4,643
41	(\$749,500,180)	(\$401,274,502)	(\$249,761,496)	(\$131,454,859)	-4,643
42	(\$665,269,054)	(\$349,446,973)	(\$205,066,241)	(\$116,135,383)	-3,721
43	(\$1,443,400,324)	(\$730,080,740)	(\$434,616,645)	(\$252,637,031)	-7,935
44	(\$1,182,620,524)	(\$588,112,153)	(\$356,874,300)	(\$216,237,477)	-6,745
45	(\$886,876,656)	(\$450,973,675)	(\$276,392,072)	(\$149,595,518)	-5,082

**The Total Annual Impact of Losses (Treatment, Morbidity, and Mortality)
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Results by Texas House District**

House District	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
46	(\$872,088,925)	(\$458,186,851)	(\$283,001,173)	(\$128,490,880)	-4,881
47	(\$909,540,596)	(\$477,863,587)	(\$295,154,597)	(\$134,008,894)	-5,091
48	(\$909,540,596)	(\$477,863,587)	(\$295,154,597)	(\$134,008,894)	-5,091
49	(\$877,439,163)	(\$460,997,813)	(\$284,737,376)	(\$129,279,168)	-4,911
50	(\$872,088,925)	(\$458,186,851)	(\$283,001,173)	(\$128,490,880)	-4,881
51	(\$909,540,596)	(\$477,863,587)	(\$295,154,597)	(\$134,008,894)	-5,091
52	(\$531,959,959)	(\$284,281,920)	(\$179,307,716)	(\$94,308,087)	-3,249
53	(\$2,059,136,366)	(\$1,014,299,410)	(\$600,160,144)	(\$352,282,450)	-11,252
54	(\$1,161,571,463)	(\$617,218,168)	(\$388,779,449)	(\$213,037,907)	-7,291
55	(\$1,012,206,638)	(\$543,385,445)	(\$344,087,453)	(\$184,664,243)	-6,400
56	(\$1,823,606,765)	(\$883,362,491)	(\$535,107,379)	(\$274,117,115)	-9,757
57	(\$1,843,374,061)	(\$940,011,037)	(\$578,124,457)	(\$320,960,987)	-10,592
58	(\$1,500,145,839)	(\$749,563,116)	(\$472,134,692)	(\$252,697,090)	-8,628
59	(\$1,242,656,612)	(\$649,364,635)	(\$404,853,679)	(\$238,102,838)	-7,720
60	(\$2,170,747,742)	(\$1,085,596,248)	(\$651,334,987)	(\$385,461,694)	-12,105
61	(\$1,511,480,386)	(\$731,776,871)	(\$431,115,206)	(\$243,066,667)	-7,763
62	(\$1,737,684,990)	(\$907,146,536)	(\$570,811,947)	(\$321,496,631)	-10,688
63	(\$854,929,031)	(\$415,438,943)	(\$253,428,459)	(\$120,390,137)	-4,399
64	(\$854,929,031)	(\$415,438,943)	(\$253,428,459)	(\$120,390,137)	-4,399
65	(\$854,929,031)	(\$415,438,943)	(\$253,428,459)	(\$120,390,137)	-4,399
66	(\$815,704,040)	(\$420,993,689)	(\$258,288,797)	(\$127,148,042)	-4,515
67	(\$815,704,040)	(\$420,993,689)	(\$258,288,797)	(\$127,148,042)	-4,515
68	(\$1,921,501,733)	(\$970,913,516)	(\$575,950,683)	(\$326,967,933)	-10,329
69	(\$1,741,237,831)	(\$935,722,823)	(\$555,965,228)	(\$293,754,549)	-9,831
70	(\$815,704,040)	(\$420,993,689)	(\$258,288,797)	(\$127,148,042)	-4,515
71	(\$1,868,962,347)	(\$942,369,061)	(\$555,283,210)	(\$275,687,866)	-9,666
72	(\$1,818,268,963)	(\$886,163,072)	(\$513,867,176)	(\$275,946,899)	-9,206
73	(\$1,683,899,665)	(\$821,264,317)	(\$496,808,224)	(\$278,728,164)	-9,317
74	(\$1,015,138,292)	(\$535,085,842)	(\$324,776,408)	(\$195,056,305)	-6,152
75	(\$1,252,470,919)	(\$612,834,791)	(\$369,458,671)	(\$176,655,406)	-6,545
76	(\$1,252,470,919)	(\$612,834,791)	(\$369,458,671)	(\$176,655,406)	-6,545
77	(\$1,252,470,919)	(\$612,834,791)	(\$369,458,671)	(\$176,655,406)	-6,545
78	(\$1,252,470,919)	(\$612,834,791)	(\$369,458,671)	(\$176,655,406)	-6,545
79	(\$1,252,470,919)	(\$612,834,791)	(\$369,458,671)	(\$176,655,406)	-6,545
80	(\$907,376,649)	(\$474,462,470)	(\$283,781,590)	(\$165,572,525)	-5,283
81	(\$1,562,624,938)	(\$782,933,169)	(\$464,071,569)	(\$243,509,295)	-7,963
82	(\$1,214,507,900)	(\$615,174,573)	(\$355,203,761)	(\$182,162,906)	-6,020
83	(\$1,449,802,297)	(\$753,492,382)	(\$451,457,522)	(\$238,998,454)	-8,077
84	(\$1,445,573,554)	(\$756,527,646)	(\$466,027,291)	(\$229,380,520)	-8,330
85	(\$1,197,074,638)	(\$594,276,833)	(\$348,661,393)	(\$185,922,640)	-6,073
86	(\$1,171,585,263)	(\$604,829,215)	(\$363,574,040)	(\$190,012,914)	-6,534
87	(\$1,716,746,474)	(\$868,044,662)	(\$509,790,045)	(\$264,989,611)	-8,886
88	(\$1,149,017,393)	(\$571,528,970)	(\$339,352,964)	(\$203,379,066)	-6,185
89	(\$815,704,040)	(\$420,993,689)	(\$258,288,797)	(\$127,148,042)	-4,515
90	(\$1,359,860,220)	(\$675,227,688)	(\$406,259,083)	(\$184,928,000)	-6,938

**The Total Annual Impact of Losses (Treatment, Morbidity, and Mortality)
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Results by Texas House District**

House District	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
91	(\$1,359,860,220)	(\$675,227,688)	(\$406,259,083)	(\$184,928,000)	-6,938
92	(\$1,359,860,220)	(\$675,227,688)	(\$406,259,083)	(\$184,928,000)	-6,938
93	(\$1,359,860,220)	(\$675,227,688)	(\$406,259,083)	(\$184,928,000)	-6,938
94	(\$1,359,860,220)	(\$675,227,688)	(\$406,259,083)	(\$184,928,000)	-6,938
95	(\$1,359,860,220)	(\$675,227,688)	(\$406,259,083)	(\$184,928,000)	-6,938
96	(\$1,359,860,220)	(\$675,227,688)	(\$406,259,083)	(\$184,928,000)	-6,938
97	(\$1,359,860,220)	(\$675,227,688)	(\$406,259,083)	(\$184,928,000)	-6,938
98	(\$1,359,860,220)	(\$675,227,688)	(\$406,259,083)	(\$184,928,000)	-6,938
99	(\$1,359,860,220)	(\$675,227,688)	(\$406,259,083)	(\$184,928,000)	-6,938
100	(\$1,441,687,503)	(\$703,974,834)	(\$411,190,468)	(\$155,458,103)	-6,574
101	(\$1,344,916,701)	(\$667,807,603)	(\$401,794,697)	(\$182,895,824)	-6,862
102	(\$1,441,687,503)	(\$703,974,834)	(\$411,190,468)	(\$155,458,103)	-6,574
103	(\$1,441,687,503)	(\$703,974,834)	(\$411,190,468)	(\$155,458,103)	-6,574
104	(\$1,441,687,503)	(\$703,974,834)	(\$411,190,468)	(\$155,458,103)	-6,574
105	(\$1,441,687,503)	(\$703,974,834)	(\$411,190,468)	(\$155,458,103)	-6,574
106	(\$854,929,031)	(\$415,438,943)	(\$253,428,459)	(\$120,390,137)	-4,399
107	(\$1,441,687,503)	(\$703,974,834)	(\$411,190,468)	(\$155,458,103)	-6,574
108	(\$1,441,687,503)	(\$703,974,834)	(\$411,190,468)	(\$155,458,103)	-6,574
109	(\$1,441,687,503)	(\$703,974,834)	(\$411,190,468)	(\$155,458,103)	-6,574
110	(\$1,441,687,503)	(\$703,974,834)	(\$411,190,468)	(\$155,458,103)	-6,574
111	(\$1,472,145,689)	(\$718,847,542)	(\$419,877,591)	(\$158,742,429)	-6,712
112	(\$1,441,687,503)	(\$703,974,834)	(\$411,190,468)	(\$155,458,103)	-6,574
113	(\$1,472,145,689)	(\$718,847,542)	(\$419,877,591)	(\$158,742,429)	-6,712
114	(\$1,472,145,689)	(\$718,847,542)	(\$419,877,591)	(\$158,742,429)	-6,712
115	(\$1,472,145,689)	(\$718,847,542)	(\$419,877,591)	(\$158,742,429)	-6,712
116	(\$1,411,690,488)	(\$714,889,821)	(\$439,224,391)	(\$206,775,208)	-7,721
117	(\$1,411,690,488)	(\$714,889,821)	(\$439,224,391)	(\$206,775,208)	-7,721
118	(\$1,411,690,488)	(\$714,889,821)	(\$439,224,391)	(\$206,775,208)	-7,721
119	(\$1,411,690,488)	(\$714,889,821)	(\$439,224,391)	(\$206,775,208)	-7,721
120	(\$1,411,690,488)	(\$714,889,821)	(\$439,224,391)	(\$206,775,208)	-7,721
121	(\$1,411,690,488)	(\$714,889,821)	(\$439,224,391)	(\$206,775,208)	-7,721
122	(\$1,411,690,488)	(\$714,889,821)	(\$439,224,391)	(\$206,775,208)	-7,721
123	(\$1,411,690,488)	(\$714,889,821)	(\$439,224,391)	(\$206,775,208)	-7,721
124	(\$1,411,690,488)	(\$714,889,821)	(\$439,224,391)	(\$206,775,208)	-7,721
125	(\$1,411,690,488)	(\$714,889,821)	(\$439,224,391)	(\$206,775,208)	-7,721
126	(\$1,475,563,845)	(\$675,652,872)	(\$395,856,924)	(\$136,334,268)	-6,078
127	(\$1,475,563,845)	(\$675,652,872)	(\$395,856,924)	(\$136,334,268)	-6,078
128	(\$1,475,563,845)	(\$675,652,872)	(\$395,856,924)	(\$136,334,268)	-6,078
129	(\$1,475,563,845)	(\$675,652,872)	(\$395,856,924)	(\$136,334,268)	-6,078
130	(\$1,475,563,845)	(\$675,652,872)	(\$395,856,924)	(\$136,334,268)	-6,078
131	(\$1,475,563,845)	(\$675,652,872)	(\$395,856,924)	(\$136,334,268)	-6,078
132	(\$1,475,563,845)	(\$675,652,872)	(\$395,856,924)	(\$136,334,268)	-6,078
133	(\$1,475,563,845)	(\$675,652,872)	(\$395,856,924)	(\$136,334,268)	-6,078
134	(\$1,475,563,845)	(\$675,652,872)	(\$395,856,924)	(\$136,334,268)	-6,078
135	(\$1,475,563,845)	(\$675,652,872)	(\$395,856,924)	(\$136,334,268)	-6,078

**The Total Annual Impact of Losses (Treatment, Morbidity, and Mortality)
Associated with the Incidence of Cancer on Business Activity in Texas:
Results by Texas House District**

House District	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
136	(\$531,959,959)	(\$284,281,920)	(\$179,307,716)	(\$94,308,087)	-3,249
137	(\$1,440,431,372)	(\$659,565,899)	(\$386,431,759)	(\$133,088,214)	-5,934
138	(\$1,440,431,372)	(\$659,565,899)	(\$386,431,759)	(\$133,088,214)	-5,934
139	(\$1,440,431,372)	(\$659,565,899)	(\$386,431,759)	(\$133,088,214)	-5,934
140	(\$1,440,431,372)	(\$659,565,899)	(\$386,431,759)	(\$133,088,214)	-5,934
141	(\$1,475,563,845)	(\$675,652,872)	(\$395,856,924)	(\$136,334,268)	-6,078
142	(\$1,475,563,845)	(\$675,652,872)	(\$395,856,924)	(\$136,334,268)	-6,078
143	(\$1,475,563,845)	(\$675,652,872)	(\$395,856,924)	(\$136,334,268)	-6,078
144	(\$1,475,563,845)	(\$675,652,872)	(\$395,856,924)	(\$136,334,268)	-6,078
145	(\$1,475,563,845)	(\$675,652,872)	(\$395,856,924)	(\$136,334,268)	-6,078
146	(\$1,475,563,845)	(\$675,652,872)	(\$395,856,924)	(\$136,334,268)	-6,078
147	(\$1,440,431,372)	(\$659,565,899)	(\$386,431,759)	(\$133,088,214)	-5,934
148	(\$1,440,431,372)	(\$659,565,899)	(\$386,431,759)	(\$133,088,214)	-5,934
149	(\$1,440,431,372)	(\$659,565,899)	(\$386,431,759)	(\$133,088,214)	-5,934
150	(\$1,440,431,372)	(\$659,565,899)	(\$386,431,759)	(\$133,088,214)	-5,934
TOTAL	(\$204,473,797,970)	(\$100,813,055,453)	(\$60,573,246,198)	(\$28,869,361,809)	-1,045,817

NOTE: In cases in which a county was part of more than one district, allocations are based on the percentage of the population residing in a district. This convention is adopted because of a lack of subcounty data sufficient for allocation purposes. In some instances, this approach will result in districts which reflect the same proportion of a large urban county reporting identical results. Allocations reflect district maps as currently defined.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

**The Total Annual Impact of Losses (Treatment, Morbidity, and Mortality)
Associated with the Incidence of Cancer on Business Activity in Texas:
Results by Texas Senate District**

Senate District	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
1	(\$10,416,254,913)	(\$5,267,510,636)	(\$3,192,610,797)	(\$1,627,041,297)	-56,627
2	(\$8,128,639,077)	(\$4,097,360,152)	(\$2,510,088,582)	(\$1,187,686,379)	-43,946
3	(\$8,833,761,102)	(\$4,481,623,233)	(\$2,721,840,420)	(\$1,527,508,544)	-49,726
4	(\$6,867,339,575)	(\$3,341,015,846)	(\$2,007,796,170)	(\$959,595,760)	-33,997
5	(\$3,787,339,744)	(\$1,950,942,526)	(\$1,181,989,810)	(\$675,673,027)	-21,819
6	(\$5,251,989,170)	(\$2,391,067,626)	(\$1,346,921,796)	(\$488,410,330)	-20,223
7	(\$5,241,354,438)	(\$2,385,239,382)	(\$1,342,889,840)	(\$487,704,233)	-20,157
8	(\$3,402,967,448)	(\$1,717,807,914)	(\$1,018,401,798)	(\$484,942,442)	-17,352
9	(\$7,117,210,263)	(\$3,498,967,506)	(\$2,080,142,115)	(\$879,036,084)	-34,564
10	(\$5,880,195,498)	(\$2,900,316,260)	(\$1,708,596,550)	(\$792,154,959)	-28,894
11	(\$7,253,145,885)	(\$3,417,959,970)	(\$2,031,580,506)	(\$927,514,445)	-34,119
12	(\$3,802,770,787)	(\$1,850,690,330)	(\$1,091,021,323)	(\$543,341,146)	-18,770
13	(\$5,815,373,366)	(\$2,696,724,437)	(\$1,560,090,115)	(\$590,823,099)	-24,278
14	(\$3,239,489,493)	(\$1,673,269,080)	(\$1,002,284,147)	(\$509,262,007)	-17,565
15	(\$4,988,635,051)	(\$2,271,303,021)	(\$1,279,491,100)	(\$464,988,908)	-19,219
16	(\$5,214,288,990)	(\$2,542,411,592)	(\$1,436,836,561)	(\$572,996,400)	-22,710
17	(\$5,024,111,846)	(\$2,327,558,679)	(\$1,336,080,348)	(\$553,452,959)	-21,028
18	(\$9,881,055,010)	(\$4,848,983,940)	(\$2,946,080,613)	(\$1,437,453,262)	-51,426
19	(\$10,174,537,468)	(\$4,997,345,201)	(\$3,124,137,964)	(\$1,361,392,697)	-54,134
20	(\$8,810,215,178)	(\$4,219,352,839)	(\$2,601,769,138)	(\$1,085,463,742)	-44,051
21	(\$6,458,044,328)	(\$3,294,722,272)	(\$2,031,526,587)	(\$1,040,491,129)	-36,644
22	(\$7,108,034,949)	(\$3,472,911,056)	(\$2,123,883,225)	(\$1,162,898,466)	-38,842
23	(\$5,248,306,458)	(\$2,560,191,308)	(\$1,448,695,296)	(\$577,891,440)	-22,921
24	(\$6,262,730,276)	(\$3,187,340,403)	(\$1,924,406,505)	(\$1,109,594,038)	-35,893
25	(\$4,817,413,943)	(\$2,405,132,555)	(\$1,442,532,120)	(\$782,742,620)	-26,115
26	(\$4,718,504,178)	(\$2,367,424,744)	(\$1,410,086,405)	(\$724,956,453)	-24,951
27	(\$3,735,638,453)	(\$1,941,949,062)	(\$1,182,667,419)	(\$647,771,163)	-22,029
28	(\$11,690,537,436)	(\$5,893,779,705)	(\$3,650,792,952)	(\$1,820,624,071)	-65,340
29	(\$4,680,278,202)	(\$2,272,981,909)	(\$1,334,224,704)	(\$702,709,091)	-23,906
30	(\$10,422,254,321)	(\$5,278,075,200)	(\$3,257,165,115)	(\$1,571,253,001)	-57,605
31	(\$10,201,381,127)	(\$5,261,097,068)	(\$3,246,616,178)	(\$1,571,988,617)	-56,965
TOTAL	(\$204,473,797,970)	(\$100,813,055,453)	(\$60,573,246,198)	(\$28,869,361,809)	-1,045,817

NOTE: In cases in which a county was part of more than one district, allocations are based on the percentage of the population residing in a district. This convention is adopted because of a lack of subcounty data sufficient for allocation purposes. In some instances, this approach will result in districts which reflect the same proportion of a large urban county reporting identical results. Allocations reflect district maps as currently defined.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

**The Total Annual Impact of Losses (Treatment, Morbidity, and Mortality)
Associated with the Incidence of Cancer on Business Activity in Texas:
Results by US Congressional District in Texas**

US Congressional District in Texas	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Retail Sales (2017 Dollars)	Employment (Permanent Jobs)
1	(\$7,740,068,189)	(\$3,902,720,256)	(\$2,347,651,654)	(\$1,217,632,111)	-41,592
2	(\$5,972,520,323)	(\$2,734,785,436)	(\$1,602,278,027)	(\$551,829,182)	-24,603
3	(\$3,299,893,616)	(\$1,703,110,834)	(\$1,044,895,588)	(\$514,371,624)	-18,267
4	(\$6,696,175,835)	(\$3,426,299,938)	(\$2,124,201,085)	(\$1,230,101,907)	-39,691
5	(\$6,935,189,981)	(\$3,484,391,221)	(\$2,088,605,368)	(\$1,017,106,574)	-36,566
6	(\$5,800,127,675)	(\$2,850,637,645)	(\$1,723,216,471)	(\$831,401,087)	-29,972
7	(\$5,972,520,323)	(\$2,734,785,436)	(\$1,602,278,027)	(\$551,829,182)	-24,603
8	(\$6,532,905,815)	(\$3,190,380,195)	(\$1,913,966,399)	(\$896,935,276)	-32,717
9	(\$5,740,901,250)	(\$2,639,094,508)	(\$1,545,808,961)	(\$562,023,860)	-24,011
10	(\$5,497,399,791)	(\$2,679,717,442)	(\$1,604,590,644)	(\$723,602,627)	-27,124
11	(\$7,286,957,017)	(\$3,645,329,428)	(\$2,160,973,258)	(\$1,194,319,006)	-38,837
12	(\$5,860,661,669)	(\$2,885,492,114)	(\$1,729,695,967)	(\$823,606,925)	-29,872
13	(\$6,797,793,929)	(\$3,489,210,642)	(\$2,068,468,070)	(\$1,113,543,036)	-36,667
14	(\$7,239,706,150)	(\$3,514,488,362)	(\$2,176,540,074)	(\$1,147,141,336)	-38,681
15	(\$3,627,977,956)	(\$1,887,013,462)	(\$1,158,498,681)	(\$636,438,662)	-21,465
16	(\$5,448,248,497)	(\$2,665,831,339)	(\$1,607,145,220)	(\$768,451,017)	-28,470
17	(\$5,782,656,225)	(\$2,897,556,783)	(\$1,757,019,705)	(\$926,665,556)	-31,893
18	(\$5,972,520,323)	(\$2,734,785,436)	(\$1,602,278,027)	(\$551,829,182)	-24,603
19	(\$6,295,653,915)	(\$3,227,163,363)	(\$1,931,705,698)	(\$1,011,508,814)	-34,386
20	(\$5,787,931,001)	(\$2,931,048,265)	(\$1,800,820,002)	(\$847,778,355)	-31,657
21	(\$5,790,075,311)	(\$2,910,732,127)	(\$1,772,364,161)	(\$906,658,213)	-31,940
22	(\$4,291,616,942)	(\$2,019,699,807)	(\$1,193,740,210)	(\$570,277,620)	-19,949
23	(\$5,278,739,570)	(\$2,682,816,485)	(\$1,626,415,682)	(\$855,558,376)	-29,475
24	(\$5,536,513,935)	(\$2,719,344,838)	(\$1,613,934,847)	(\$675,096,563)	-26,720
25	(\$5,080,466,445)	(\$2,574,276,602)	(\$1,592,349,815)	(\$848,727,253)	-29,157
26	(\$4,054,151,354)	(\$1,982,779,187)	(\$1,204,324,739)	(\$564,458,870)	-20,795
27	(\$7,476,189,193)	(\$3,587,543,872)	(\$2,138,401,044)	(\$1,122,677,613)	-37,378
28	(\$3,904,203,492)	(\$2,017,654,663)	(\$1,221,828,264)	(\$650,312,214)	-22,151
29	(\$5,972,520,323)	(\$2,734,785,436)	(\$1,602,278,027)	(\$551,829,182)	-24,603
30	(\$5,969,804,588)	(\$2,915,050,721)	(\$1,702,676,024)	(\$643,727,918)	-27,220
31	(\$3,096,430,487)	(\$1,658,953,088)	(\$1,048,682,286)	(\$557,875,562)	-19,285
32	(\$5,786,160,171)	(\$2,831,564,412)	(\$1,657,290,123)	(\$634,613,642)	-26,600
33	(\$5,885,087,259)	(\$2,897,086,827)	(\$1,716,945,507)	(\$714,546,017)	-28,374
34	(\$4,395,848,518)	(\$2,272,346,376)	(\$1,388,939,434)	(\$762,444,368)	-25,860
35	(\$4,820,813,935)	(\$2,458,755,744)	(\$1,509,662,809)	(\$730,619,091)	-26,709
36	(\$6,847,366,965)	(\$3,325,823,165)	(\$1,992,776,299)	(\$961,823,990)	-33,927
TOTAL	(\$204,473,797,970)	(\$100,813,055,453)	(\$60,573,246,198)	(\$28,869,361,809)	-1,045,817

NOTE: In cases in which a county is part of more than one district, allocations are based on the percentage of the population residing in a district. This convention is adopted because of a lack of subcounty data sufficient for allocation purposes. In some instances, this approach will result in districts which reflect the same proportion of a large urban county reporting identical results. Allocations reflect district maps as currently defined.
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

The Impact of Losses (Treatment, Morbidity, and Mortality) Associated with Lung
and Bronchus Cancer, Colorectal Cancer, Breast Cancer, and Pancreatic Cancer
Deaths in 2017 on Business Activity in Texas

The Impact of Direct Medical Expenses and Related Outlays Associated with Lung or Bronchus Cancer Deaths in 2017 on Business Activity in Texas

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$100,116,964)	(\$27,445,152)	(\$18,054,863)	(278)
Mining	(\$162,985,471)	(\$37,234,649)	(\$19,098,671)	(99)
Construction	(\$137,797,738)	(\$70,244,962)	(\$57,886,236)	(804)
Nondurable Manufacturing	(\$599,678,289)	(\$169,035,226)	(\$87,972,163)	(1,363)
Durable Manufacturing	(\$208,781,459)	(\$83,364,621)	(\$54,417,900)	(694)
Transportation and Utilities	(\$634,562,359)	(\$218,132,130)	(\$130,932,506)	(1,539)
Information	(\$132,742,348)	(\$81,383,754)	(\$35,150,341)	(321)
Wholesale Trade	(\$176,779,733)	(\$119,612,595)	(\$68,969,676)	(760)
Retail Trade (including Restaurants)	(\$710,319,615)	(\$533,060,084)	(\$309,919,579)	(9,369)
FIRE	(\$1,036,153,830)	(\$354,469,119)	(\$149,148,171)	(1,600)
Business Services	(\$319,259,117)	(\$203,066,532)	(\$165,650,253)	(1,990)
Health Services	(\$929,589,245)	(\$687,562,057)	(\$581,340,080)	(9,493)
Other Services	(\$330,239,770)	(\$170,369,863)	(\$135,995,540)	(3,194)
TOTAL	(\$5,479,005,937)	(\$2,754,980,744)	(\$1,814,535,979)	(31,504)

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

NOTE: Medical costs based on estimated costs per site for cancer cases over the diagnosis period as estimated by the National Institutes of Health (adjusted to reflect current dollars based on the Medical Services CPI for Texas areas as maintained by the US Bureau of Labor Statistics), (2) estimated deaths by cancer site in Texas for 2017 as compiled by the Texas Cancer Registry, and (3) estimated patterns following diagnosis based on patterns of incidence and death by site. Morbidity and mortality effects are estimated based on patterns relative to medical costs in Texas and approximate cost allocations over the disease cycle (which provides a reasonable proxy for morbidity and mortality patterns).

The Impact of Morbidity Losses Associated with Lung or Bronchus Cancer Deaths in 2017 on Business Activity in Texas

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$22,028,682)	(\$6,558,232)	(\$3,965,873)	(71)
Mining	(\$158,058,726)	(\$75,960,257)	(\$25,976,821)	(103)
Construction	(\$63,246,828)	(\$30,828,604)	(\$23,246,092)	(351)
Nondurable Manufacturing	(\$209,477,933)	(\$57,906,980)	(\$30,541,757)	(313)
Durable Manufacturing	(\$100,778,612)	(\$41,919,916)	(\$28,220,092)	(270)
Transportation and Utilities	(\$159,386,389)	(\$55,395,272)	(\$30,943,819)	(317)
Information	(\$44,485,156)	(\$29,633,688)	(\$13,065,242)	(116)
Wholesale Trade	(\$60,874,290)	(\$47,486,792)	(\$26,660,405)	(303)
Retail Trade (including Restaurants)	(\$249,665,972)	(\$193,253,520)	(\$111,411,462)	(3,419)
FIRE	(\$356,328,128)	(\$105,907,363)	(\$37,730,315)	(351)
Business Services	(\$109,024,171)	(\$79,092,607)	(\$64,035,793)	(732)
Health Services	(\$70,614,891)	(\$56,773,622)	(\$45,397,068)	(779)
Other Services	(\$113,156,146)	(\$59,761,072)	(\$45,612,128)	(1,042)
TOTAL	(\$1,717,125,923)	(\$840,477,923)	(\$486,806,867)	(8,166)

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

NOTE: Medical costs based on estimated costs per site for cancer cases over the diagnosis period as estimated by the National Institutes of Health (adjusted to reflect current dollars based on the Medical Services CPI for Texas areas as maintained by the US Bureau of Labor Statistics), (2) estimated deaths by cancer site in Texas for 2017 as compiled by the Texas Cancer Registry, and (3) estimated patterns following diagnosis based on patterns of incidence and death by site. Morbidity and mortality effects are estimated based on patterns relative to medical costs in Texas and approximate cost allocations over the disease cycle (which provides a reasonable proxy for morbidity and mortality patterns).

The Impact of Mortality Losses Associated with Lung and Bronchus Cancer Deaths in 2017 on Business Activity in Texas

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$173,754,703)	(\$51,729,092)	(\$31,281,445)	(579)
Mining	(\$1,246,713,142)	(\$599,148,514)	(\$204,896,272)	(839)
Construction	(\$498,869,339)	(\$243,165,479)	(\$183,357,219)	(2,874)
Nondurable Manufacturing	(\$1,652,290,251)	(\$456,750,439)	(\$240,902,925)	(2,560)
Durable Manufacturing	(\$794,907,205)	(\$330,649,949)	(\$222,590,426)	(2,206)
Transportation and Utilities	(\$1,257,185,290)	(\$436,938,946)	(\$244,074,258)	(2,589)
Information	(\$350,883,684)	(\$233,740,387)	(\$103,054,160)	(949)
Wholesale Trade	(\$480,155,565)	(\$374,559,566)	(\$210,288,153)	(2,476)
Retail Trade (including Restaurants)	(\$1,969,279,745)	(\$1,524,317,628)	(\$878,775,487)	(27,961)
FIRE	(\$2,810,594,332)	(\$835,361,039)	(\$297,603,813)	(2,868)
Business Services	(\$859,945,355)	(\$623,855,415)	(\$505,092,425)	(5,989)
Health Services	(\$556,986,091)	(\$447,810,898)	(\$358,076,533)	(6,370)
Other Services	(\$892,536,959)	(\$471,374,885)	(\$359,772,856)	(8,517)
TOTAL	(\$13,544,101,663)	(\$6,629,402,239)	(\$3,839,765,973)	(66,779)

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

NOTE: Medical costs based on estimated costs per site for cancer cases over the diagnosis period as estimated by the National Institutes of Health (adjusted to reflect current dollars based on the Medical Services CPI for Texas areas as maintained by the US Bureau of Labor Statistics), (2) estimated deaths by cancer site in Texas for 2017 as compiled by the Texas Cancer Registry, and (3) estimated patterns following diagnosis based on patterns of incidence and death by site. Morbidity and mortality effects are estimated based on patterns relative to medical costs in Texas and approximate cost allocations over the disease cycle (which provides a reasonable proxy for morbidity and mortality patterns).

The Total Impact of Losses (Treatment, Morbidity, and Mortality) Associated with Lung and Bronchus Cancer Deaths in 2017 on Business Activity in Texas

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$295,900,349)	(\$85,732,476)	(\$53,302,181)	(928)
Mining	(\$1,567,757,339)	(\$712,343,421)	(\$249,971,764)	(1,041)
Construction	(\$699,913,906)	(\$344,239,044)	(\$264,489,547)	(4,029)
Nondurable Manufacturing	(\$2,461,446,473)	(\$683,692,645)	(\$359,416,844)	(4,236)
Durable Manufacturing	(\$1,104,467,276)	(\$455,934,486)	(\$305,228,417)	(3,170)
Transportation and Utilities	(\$2,051,134,038)	(\$710,466,348)	(\$405,950,584)	(4,445)
Information	(\$528,111,187)	(\$344,757,828)	(\$151,269,743)	(1,386)
Wholesale Trade	(\$717,809,588)	(\$541,658,954)	(\$305,918,235)	(3,539)
Retail Trade (including Restaurants)	(\$2,929,265,331)	(\$2,250,631,232)	(\$1,300,106,528)	(40,750)
FIRE	(\$4,203,076,290)	(\$1,295,737,522)	(\$484,482,299)	(4,819)
Business Services	(\$1,288,228,644)	(\$906,014,554)	(\$734,778,472)	(8,711)
Health Services	(\$1,557,190,226)	(\$1,192,146,577)	(\$984,813,681)	(16,643)
Other Services	(\$1,335,932,875)	(\$701,505,820)	(\$541,380,524)	(12,753)
TOTAL	(\$20,740,233,523)	(\$10,224,860,906)	(\$6,141,108,819)	(106,449)

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

NOTE: Medical costs based on estimated costs per site for cancer cases over the diagnosis period as estimated by the National Institutes of Health (adjusted to reflect current dollars based on the Medical Services CPI for Texas areas as maintained by the US Bureau of Labor Statistics), (2) estimated deaths by cancer site in Texas for 2017 as compiled by the Texas Cancer Registry, and (3) estimated patterns following diagnosis based on patterns of incidence and death by site. Morbidity and mortality effects are estimated based on patterns relative to medical costs in Texas and approximate cost allocations over the disease cycle (which provides a reasonable proxy for morbidity and mortality patterns).

The Impact of Direct Medical Expenses and Related Outlays Associated with Colorectal Cancer Deaths in 2017 on Business Activity in Texas

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$42,987,216)	(\$11,784,124)	(\$7,752,216)	(119)
Mining	(\$69,981,064)	(\$15,987,440)	(\$8,200,396)	(43)
Construction	(\$59,166,208)	(\$30,161,076)	(\$24,854,610)	(345)
Nondurable Manufacturing	(\$257,483,839)	(\$72,578,647)	(\$37,772,603)	(585)
Durable Manufacturing	(\$89,644,485)	(\$35,794,263)	(\$23,365,411)	(298)
Transportation and Utilities	(\$272,462,010)	(\$93,659,382)	(\$56,218,484)	(661)
Information	(\$56,995,575)	(\$34,943,738)	(\$15,092,500)	(138)
Wholesale Trade	(\$75,903,905)	(\$51,358,054)	(\$29,613,507)	(326)
Retail Trade (including Restaurants)	(\$304,989,899)	(\$228,879,983)	(\$133,070,155)	(4,023)
FIRE	(\$444,893,321)	(\$152,198,389)	(\$64,039,743)	(687)
Business Services	(\$137,080,272)	(\$87,190,667)	(\$71,125,241)	(854)
Health Services	(\$399,137,690)	(\$295,218,488)	(\$249,609,963)	(4,076)
Other Services	(\$141,795,034)	(\$73,151,700)	(\$58,392,399)	(1,371)
TOTAL	(\$2,352,520,520)	(\$1,182,905,952)	(\$779,107,228)	(13,527)

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

NOTE: Medical costs based on estimated costs per site for cancer cases over the diagnosis period as estimated by the National Institutes of Health (adjusted to reflect current dollars based on the Medical Services CPI for Texas areas as maintained by the US Bureau of Labor Statistics), (2) estimated deaths by cancer site in Texas for 2017 as compiled by the Texas Cancer Registry, and (3) estimated patterns following diagnosis based on patterns of incidence and death by site. Morbidity and mortality effects are estimated based on patterns relative to medical costs in Texas and approximate cost allocations over the disease cycle (which provides a reasonable proxy for morbidity and mortality patterns).

The Impact of Morbidity Losses Associated with Colorectal Cancer Deaths in 2017 on Business Activity in Texas

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$31,751,213)	(\$9,452,759)	(\$5,716,241)	(102)
Mining	(\$227,819,181)	(\$109,485,911)	(\$37,441,894)	(148)
Construction	(\$91,161,311)	(\$44,435,050)	(\$33,505,937)	(507)
Nondurable Manufacturing	(\$301,932,657)	(\$83,464,678)	(\$44,021,600)	(451)
Durable Manufacturing	(\$145,258,041)	(\$60,421,598)	(\$40,675,250)	(389)
Transportation and Utilities	(\$229,732,818)	(\$79,844,408)	(\$44,601,116)	(456)
Information	(\$64,119,027)	(\$42,712,747)	(\$18,831,689)	(167)
Wholesale Trade	(\$87,741,634)	(\$68,445,459)	(\$38,427,184)	(436)
Retail Trade (including Restaurants)	(\$359,858,001)	(\$278,547,472)	(\$160,583,782)	(4,928)
FIRE	(\$513,596,334)	(\$152,650,407)	(\$54,382,885)	(506)
Business Services	(\$157,142,842)	(\$114,000,747)	(\$92,298,492)	(1,056)
Health Services	(\$101,781,325)	(\$81,831,103)	(\$65,433,418)	(1,123)
Other Services	(\$163,098,497)	(\$86,137,089)	(\$65,743,397)	(1,501)
TOTAL	(\$2,474,992,881)	(\$1,211,429,429)	(\$701,662,885)	(11,770)

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

NOTE: Medical costs based on estimated costs per site for cancer cases over the diagnosis period as estimated by the National Institutes of Health (adjusted to reflect current dollars based on the Medical Services CPI for Texas areas as maintained by the US Bureau of Labor Statistics), (2) estimated deaths by cancer site in Texas for 2017 as compiled by the Texas Cancer Registry, and (3) estimated patterns following diagnosis based on patterns of incidence and death by site. Morbidity and mortality effects are estimated based on patterns relative to medical costs in Texas and approximate cost allocations over the disease cycle (which provides a reasonable proxy for morbidity and mortality patterns).

The Impact of Mortality Losses Associated with Colorectal Cancer Deaths in 2017 on Business Activity in Texas

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$50,108,333)	(\$14,917,919)	(\$9,021,114)	(167)
Mining	(\$359,533,962)	(\$172,785,729)	(\$59,089,109)	(242)
Construction	(\$143,866,671)	(\$70,125,392)	(\$52,877,559)	(829)
Nondurable Manufacturing	(\$476,496,509)	(\$131,720,192)	(\$69,472,905)	(738)
Durable Manufacturing	(\$229,239,692)	(\$95,354,643)	(\$64,191,846)	(636)
Transportation and Utilities	(\$362,553,977)	(\$126,006,845)	(\$70,387,471)	(747)
Information	(\$101,189,758)	(\$67,407,332)	(\$29,719,323)	(274)
Wholesale Trade	(\$138,469,891)	(\$108,017,538)	(\$60,644,049)	(714)
Retail Trade (including Restaurants)	(\$567,911,675)	(\$439,591,063)	(\$253,426,086)	(8,064)
FIRE	(\$810,534,582)	(\$240,905,990)	(\$85,824,617)	(827)
Business Services	(\$247,995,750)	(\$179,910,840)	(\$145,661,319)	(1,727)
Health Services	(\$160,626,698)	(\$129,142,159)	(\$103,264,071)	(1,837)
Other Services	(\$257,394,695)	(\$135,937,670)	(\$103,753,266)	(2,456)
TOTAL	(\$3,905,922,192)	(\$1,911,823,314)	(\$1,107,332,734)	(19,258)

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

NOTE: Medical costs based on estimated costs per site for cancer cases over the diagnosis period as estimated by the National Institutes of Health (adjusted to reflect current dollars based on the Medical Services CPI for Texas areas as maintained by the US Bureau of Labor Statistics), (2) estimated deaths by cancer site in Texas for 2017 as compiled by the Texas Cancer Registry, and (3) estimated patterns following diagnosis based on patterns of incidence and death by site. Morbidity and mortality effects are estimated based on patterns relative to medical costs in Texas and approximate cost allocations over the disease cycle (which provides a reasonable proxy for morbidity and mortality patterns).

The Total Impact of Losses (Treatment, Morbidity, and Mortality) Associated with Colorectal Cancer Deaths in 2017 on Business Activity in Texas

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$124,846,762)	(\$36,154,802)	(\$22,489,572)	(389)
Mining	(\$657,334,207)	(\$298,259,079)	(\$104,731,398)	(432)
Construction	(\$294,194,191)	(\$144,721,518)	(\$111,238,106)	(1,681)
Nondurable Manufacturing	(\$1,035,913,005)	(\$287,763,517)	(\$151,267,108)	(1,775)
Durable Manufacturing	(\$464,142,218)	(\$191,570,504)	(\$128,232,507)	(1,323)
Transportation and Utilities	(\$864,748,805)	(\$299,510,636)	(\$171,207,071)	(1,864)
Information	(\$222,304,360)	(\$145,063,818)	(\$63,643,512)	(579)
Wholesale Trade	(\$302,115,430)	(\$227,821,052)	(\$128,684,739)	(1,477)
Retail Trade (including Restaurants)	(\$1,232,759,575)	(\$947,018,518)	(\$547,080,024)	(17,015)
FIRE	(\$1,769,024,237)	(\$545,754,786)	(\$204,247,245)	(2,020)
Business Services	(\$542,218,864)	(\$381,102,255)	(\$309,085,052)	(3,637)
Health Services	(\$661,545,713)	(\$506,191,750)	(\$418,307,452)	(7,036)
Other Services	(\$562,288,226)	(\$295,226,459)	(\$227,889,062)	(5,329)
TOTAL	(\$8,733,435,592)	(\$4,306,158,694)	(\$2,588,102,847)	(44,555)

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

NOTE: Medical costs based on estimated costs per site for cancer cases over the diagnosis period as estimated by the National Institutes of Health (adjusted to reflect current dollars based on the Medical Services CPI for Texas areas as maintained by the US Bureau of Labor Statistics), (2) estimated deaths by cancer site in Texas for 2017 as compiled by the Texas Cancer Registry, and (3) estimated patterns following diagnosis based on patterns of incidence and death by site. Morbidity and mortality effects are estimated based on patterns relative to medical costs in Texas and approximate cost allocations over the disease cycle (which provides a reasonable proxy for morbidity and mortality patterns).

The Impact of Direct Medical Expenses and Related Outlays Associated with Breast Cancer Deaths in 2017 on Business Activity in Texas

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$22,130,387)	(\$6,066,623)	(\$3,990,943)	(61)
Mining	(\$36,027,177)	(\$8,230,545)	(\$4,221,672)	(22)
Construction	(\$30,459,546)	(\$15,527,321)	(\$12,795,482)	(178)
Nondurable Manufacturing	(\$132,556,085)	(\$37,364,447)	(\$19,445,836)	(301)
Durable Manufacturing	(\$46,150,167)	(\$18,427,360)	(\$12,028,823)	(153)
Transportation and Utilities	(\$140,267,046)	(\$48,217,089)	(\$28,942,019)	(340)
Information	(\$29,342,076)	(\$17,989,499)	(\$7,769,819)	(71)
Wholesale Trade	(\$39,076,334)	(\$26,439,806)	(\$15,245,425)	(168)
Retail Trade (including Restaurants)	(\$157,012,834)	(\$117,830,442)	(\$68,506,276)	(2,071)
FIRE	(\$229,036,965)	(\$78,353,743)	(\$32,968,507)	(354)
Business Services	(\$70,570,737)	(\$44,886,909)	(\$36,616,215)	(440)
Health Services	(\$205,481,361)	(\$151,982,382)	(\$128,502,510)	(2,098)
Other Services	(\$72,997,959)	(\$37,659,463)	(\$30,061,179)	(706)
TOTAL	(\$1,211,108,676)	(\$608,975,628)	(\$401,094,704)	(6,964)

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

NOTE: Medical costs based on estimated costs per site for cancer cases over the diagnosis period as estimated by the National Institutes of Health (adjusted to reflect current dollars based on the Medical Services CPI for Texas areas as maintained by the US Bureau of Labor Statistics), (2) estimated deaths by cancer site in Texas for 2017 as compiled by the Texas Cancer Registry, and (3) estimated patterns following diagnosis based on patterns of incidence and death by site. Morbidity and mortality effects are estimated based on patterns relative to medical costs in Texas and approximate cost allocations over the disease cycle (which provides a reasonable proxy for morbidity and mortality patterns).

The Impact of Morbidity Losses Associated with Breast Cancer Deaths in 2017 on Business Activity in Texas				
Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$7,414,574)	(\$2,207,417)	(\$1,334,862)	(24)
Mining	(\$53,200,555)	(\$25,567,256)	(\$8,743,467)	(35)
Construction	(\$21,288,077)	(\$10,376,516)	(\$7,824,339)	(118)
Nondurable Manufacturing	(\$70,507,606)	(\$19,490,752)	(\$10,279,967)	(105)
Durable Manufacturing	(\$33,920,798)	(\$14,109,710)	(\$9,498,524)	(91)
Transportation and Utilities	(\$53,647,430)	(\$18,645,343)	(\$10,415,296)	(107)
Information	(\$14,973,137)	(\$9,974,322)	(\$4,397,594)	(39)
Wholesale Trade	(\$20,489,511)	(\$15,983,450)	(\$8,973,553)	(102)
Retail Trade (including Restaurants)	(\$84,034,388)	(\$65,046,675)	(\$37,499,680)	(1,151)
FIRE	(\$119,935,512)	(\$35,647,070)	(\$12,699,544)	(118)
Business Services	(\$36,696,148)	(\$26,621,565)	(\$21,553,633)	(247)
Health Services	(\$23,768,073)	(\$19,109,278)	(\$15,280,075)	(262)
Other Services	(\$38,086,918)	(\$20,114,816)	(\$15,352,462)	(351)
TOTAL	(\$577,962,729)	(\$282,894,171)	(\$163,852,995)	(2,749)
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				
NOTE: Medical costs based on estimated costs per site for cancer cases over the diagnosis period as estimated by the National Institutes of Health (adjusted to reflect current dollars based on the Medical Services CPI for Texas areas as maintained by the US Bureau of Labor Statistics), (2) estimated deaths by cancer site in Texas for 2017 as compiled by the Texas Cancer Registry, and (3) estimated patterns following diagnosis based on patterns of incidence and death by site. Morbidity and mortality effects are estimated based on patterns relative to medical costs in Texas and approximate cost allocations over the disease cycle (which provides a reasonable proxy for morbidity and mortality patterns).				

The Impact of Mortality Losses Associated with Breast Cancer Deaths in 2017 on Business Activity in Texas

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$35,610,796)	(\$10,601,809)	(\$6,411,091)	(119)
Mining	(\$255,512,206)	(\$122,794,694)	(\$41,993,219)	(172)
Construction	(\$102,242,610)	(\$49,836,443)	(\$37,578,819)	(589)
Nondurable Manufacturing	(\$338,634,697)	(\$93,610,397)	(\$49,372,735)	(525)
Durable Manufacturing	(\$162,915,178)	(\$67,766,269)	(\$45,619,613)	(452)
Transportation and Utilities	(\$257,658,459)	(\$89,550,058)	(\$50,022,696)	(531)
Information	(\$71,913,146)	(\$47,904,782)	(\$21,120,813)	(194)
Wholesale Trade	(\$98,407,247)	(\$76,765,487)	(\$43,098,278)	(507)
Retail Trade (including Restaurants)	(\$403,601,273)	(\$312,406,877)	(\$180,103,871)	(5,731)
FIRE	(\$576,027,583)	(\$171,206,138)	(\$60,993,507)	(588)
Business Services	(\$176,244,661)	(\$127,858,340)	(\$103,518,023)	(1,228)
Health Services	(\$114,153,561)	(\$91,778,250)	(\$73,387,311)	(1,306)
Other Services	(\$182,924,267)	(\$96,607,658)	(\$73,734,970)	(1,746)
TOTAL	(\$2,775,845,682)	(\$1,358,687,201)	(\$786,954,946)	(13,686)

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

NOTE: Medical costs based on estimated costs per site for cancer cases over the diagnosis period as estimated by the National Institutes of Health (adjusted to reflect current dollars based on the Medical Services CPI for Texas areas as maintained by the US Bureau of Labor Statistics), (2) estimated deaths by cancer site in Texas for 2017 as compiled by the Texas Cancer Registry, and (3) estimated patterns following diagnosis based on patterns of incidence and death by site. Morbidity and mortality effects are estimated based on patterns relative to medical costs in Texas and approximate cost allocations over the disease cycle (which provides a reasonable proxy for morbidity and mortality patterns).

The Total Impact of Losses (Treatment, Morbidity, and Mortality) Associated with Breast Cancer Deaths in 2017 on Business Activity in Texas

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$65,155,757)	(\$18,875,849)	(\$11,736,896)	(204)
Mining	(\$344,739,938)	(\$156,592,495)	(\$54,958,359)	(228)
Construction	(\$153,990,234)	(\$75,740,279)	(\$58,198,640)	(885)
Nondurable Manufacturing	(\$541,698,388)	(\$150,465,597)	(\$79,098,537)	(931)
Durable Manufacturing	(\$242,986,143)	(\$100,303,339)	(\$67,146,959)	(696)
Transportation and Utilities	(\$451,572,934)	(\$156,412,490)	(\$89,380,010)	(977)
Information	(\$116,228,359)	(\$75,868,603)	(\$33,288,226)	(304)
Wholesale Trade	(\$157,973,092)	(\$119,188,742)	(\$67,317,256)	(777)
Retail Trade (including Restaurants)	(\$644,648,495)	(\$495,283,994)	(\$286,109,827)	(8,953)
FIRE	(\$925,000,060)	(\$285,206,952)	(\$106,661,557)	(1,060)
Business Services	(\$283,511,546)	(\$199,366,814)	(\$161,687,871)	(1,914)
Health Services	(\$343,402,996)	(\$262,869,910)	(\$217,169,896)	(3,666)
Other Services	(\$294,009,144)	(\$154,381,937)	(\$119,148,611)	(2,802)
TOTAL	(\$4,564,917,086)	(\$2,250,556,999)	(\$1,351,902,645)	(23,399)

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

NOTE: Medical costs based on estimated costs per site for cancer cases over the diagnosis period as estimated by the National Institutes of Health (adjusted to reflect current dollars based on the Medical Services CPI for Texas areas as maintained by the US Bureau of Labor Statistics), (2) estimated deaths by cancer site in Texas for 2017 as compiled by the Texas Cancer Registry, and (3) estimated patterns following diagnosis based on patterns of incidence and death by site. Morbidity and mortality effects are estimated based on patterns relative to medical costs in Texas and approximate cost allocations over the disease cycle (which provides a reasonable proxy for morbidity and mortality patterns).

**The Impact of Direct Medical Expenses and Related Outlays Associated
with Pancreatic Cancer Deaths in 2017 on Business Activity in Texas**

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$27,771,334)	(\$7,612,980)	(\$5,008,219)	(77)
Mining	(\$45,210,359)	(\$10,328,478)	(\$5,297,759)	(27)
Construction	(\$38,223,562)	(\$19,485,172)	(\$16,056,999)	(223)
Nondurable Manufacturing	(\$166,344,097)	(\$46,888,494)	(\$24,402,501)	(378)
Durable Manufacturing	(\$57,913,658)	(\$23,124,420)	(\$15,094,921)	(192)
Transportation and Utilities	(\$176,020,551)	(\$60,507,430)	(\$36,319,223)	(427)
Information	(\$36,821,253)	(\$22,574,949)	(\$9,750,314)	(89)
Wholesale Trade	(\$49,036,734)	(\$33,179,205)	(\$19,131,422)	(211)
Retail Trade (including Restaurants)	(\$197,034,772)	(\$147,864,947)	(\$85,968,249)	(2,599)
FIRE	(\$287,417,564)	(\$98,325,797)	(\$41,372,046)	(444)
Business Services	(\$88,558,933)	(\$56,328,401)	(\$45,949,540)	(552)
Health Services	(\$257,857,732)	(\$190,722,078)	(\$161,257,282)	(2,633)
Other Services	(\$91,604,844)	(\$47,258,708)	(\$37,723,652)	(886)
TOTAL	(\$1,519,815,394)	(\$764,201,060)	(\$503,332,128)	(8,739)

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

NOTE: Medical costs based on estimated costs per site for cancer cases over the diagnosis period as estimated by the National Institutes of Health (adjusted to reflect current dollars based on the Medical Services CPI for Texas areas as maintained by the US Bureau of Labor Statistics), (2) estimated deaths by cancer site in Texas for 2017 as compiled by the Texas Cancer Registry, and (3) estimated patterns following diagnosis based on patterns of incidence and death by site. Morbidity and mortality effects are estimated based on patterns relative to medical costs in Texas and approximate cost allocations over the disease cycle (which provides a reasonable proxy for morbidity and mortality patterns).

**The Impact of Morbidity Losses Associated with
Pancreatic Cancer Deaths in 2017 on Business Activity in Texas**

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$4,073,439)	(\$1,212,717)	(\$733,350)	(13)
Mining	(\$29,227,471)	(\$14,046,211)	(\$4,803,511)	(19)
Construction	(\$11,695,304)	(\$5,700,679)	(\$4,298,557)	(65)
Nondurable Manufacturing	(\$38,735,667)	(\$10,707,884)	(\$5,647,637)	(58)
Durable Manufacturing	(\$18,635,503)	(\$7,751,632)	(\$5,218,326)	(50)
Transportation and Utilities	(\$29,472,976)	(\$10,243,431)	(\$5,721,984)	(59)
Information	(\$8,225,984)	(\$5,479,721)	(\$2,415,963)	(21)
Wholesale Trade	(\$11,256,585)	(\$8,781,033)	(\$4,929,916)	(56)
Retail Trade (including Restaurants)	(\$46,167,049)	(\$35,735,525)	(\$20,601,680)	(632)
FIRE	(\$65,890,509)	(\$19,583,888)	(\$6,976,911)	(65)
Business Services	(\$20,160,233)	(\$14,625,430)	(\$11,841,196)	(135)
Health Services	(\$13,057,771)	(\$10,498,309)	(\$8,394,611)	(144)
Other Services	(\$20,924,298)	(\$11,050,734)	(\$8,434,379)	(193)
TOTAL	(\$317,522,790)	(\$155,417,195)	(\$90,018,019)	(1,510)

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

NOTE: Medical costs based on estimated costs per site for cancer cases over the diagnosis period as estimated by the National Institutes of Health (adjusted to reflect current dollars based on the Medical Services CPI for Texas areas as maintained by the US Bureau of Labor Statistics), (2) estimated deaths by cancer site in Texas for 2017 as compiled by the Texas Cancer Registry, and (3) estimated patterns following diagnosis based on patterns of incidence and death by site. Morbidity and mortality effects are estimated based on patterns relative to medical costs in Texas and approximate cost allocations over the disease cycle (which provides a reasonable proxy for morbidity and mortality patterns).

The Impact of Mortality Losses Associated with Pancreatic Cancer Deaths in 2017 on Business Activity in Texas

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$50,436,091)	(\$15,015,497)	(\$9,080,121)	(168)
Mining	(\$361,885,670)	(\$173,915,919)	(\$59,475,610)	(244)
Construction	(\$144,807,702)	(\$70,584,082)	(\$53,223,430)	(834)
Nondurable Manufacturing	(\$479,613,268)	(\$132,581,773)	(\$69,927,326)	(743)
Durable Manufacturing	(\$230,739,146)	(\$95,978,356)	(\$64,611,724)	(640)
Transportation and Utilities	(\$364,925,439)	(\$126,831,055)	(\$70,847,875)	(752)
Information	(\$101,851,639)	(\$67,848,243)	(\$29,913,717)	(275)
Wholesale Trade	(\$139,375,621)	(\$108,724,080)	(\$61,040,721)	(719)
Retail Trade (including Restaurants)	(\$571,626,379)	(\$442,466,424)	(\$255,083,744)	(8,116)
FIRE	(\$815,836,280)	(\$242,481,754)	(\$86,385,995)	(833)
Business Services	(\$249,617,887)	(\$181,087,635)	(\$146,614,088)	(1,739)
Health Services	(\$161,677,356)	(\$129,986,876)	(\$103,939,520)	(1,849)
Other Services	(\$259,078,311)	(\$136,826,837)	(\$104,431,915)	(2,472)
TOTAL	(\$3,931,470,789)	(\$1,924,328,531)	(\$1,114,575,786)	(19,384)

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

NOTE: Medical costs based on estimated costs per site for cancer cases over the diagnosis period as estimated by the National Institutes of Health (adjusted to reflect current dollars based on the Medical Services CPI for Texas areas as maintained by the US Bureau of Labor Statistics), (2) estimated deaths by cancer site in Texas for 2017 as compiled by the Texas Cancer Registry, and (3) estimated patterns following diagnosis based on patterns of incidence and death by site. Morbidity and mortality effects are estimated based on patterns relative to medical costs in Texas and approximate cost allocations over the disease cycle (which provides a reasonable proxy for morbidity and mortality patterns).

The Total Impact of Losses (Treatment, Morbidity, and Mortality) Associated with Pancreatic Cancer Deaths in 2017 on Business Activity in Texas

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	(\$82,280,864)	(\$23,841,194)	(\$14,821,690)	(258)
Mining	(\$436,323,500)	(\$198,290,608)	(\$69,576,880)	(290)
Construction	(\$194,726,568)	(\$95,769,933)	(\$73,578,986)	(1,122)
Nondurable Manufacturing	(\$684,693,032)	(\$190,178,151)	(\$99,977,464)	(1,179)
Durable Manufacturing	(\$307,288,308)	(\$126,854,409)	(\$84,924,971)	(883)
Transportation and Utilities	(\$570,418,966)	(\$197,581,916)	(\$112,889,082)	(1,237)
Information	(\$146,898,876)	(\$95,902,914)	(\$42,079,993)	(386)
Wholesale Trade	(\$199,668,941)	(\$150,684,318)	(\$85,102,059)	(986)
Retail Trade (including Restaurants)	(\$814,828,200)	(\$626,066,896)	(\$361,653,673)	(11,348)
FIRE	(\$1,169,144,354)	(\$360,391,438)	(\$134,734,952)	(1,341)
Business Services	(\$358,337,054)	(\$252,041,466)	(\$204,404,824)	(2,426)
Health Services	(\$432,592,859)	(\$331,207,264)	(\$273,591,413)	(4,626)
Other Services	(\$371,607,454)	(\$195,136,279)	(\$150,589,946)	(3,551)
TOTAL	(\$5,768,808,973)	(\$2,843,946,786)	(\$1,707,925,933)	(29,633)

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

NOTE: Medical costs based on estimated costs per site for cancer cases over the diagnosis period as estimated by the National Institutes of Health (adjusted to reflect current dollars based on the Medical Services CPI for Texas areas as maintained by the US Bureau of Labor Statistics), (2) estimated deaths by cancer site in Texas for 2017 as compiled by the Texas Cancer Registry, and (3) estimated patterns following diagnosis based on patterns of incidence and death by site. Morbidity and mortality effects are estimated based on patterns relative to medical costs in Texas and approximate cost allocations over the disease cycle (which provides a reasonable proxy for morbidity and mortality patterns).

The Annual and Cumulative Ten-Year Impact of Operations Associated with the Cancer Prevention and Research Institute of Texas (CPRIT) on Business Activity in Texas

**The Annual Impact of Operations Associated with the Cancer Prevention
and Research Institute of Texas (CPRIT) on Business Activity in Texas
(Based on Staffing for Fiscal Year 2017)**

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	\$454,705	\$126,341	\$83,388	1
Mining	\$336,041	\$78,531	\$43,751	0
Construction	\$459,493	\$243,005	\$200,255	2
Nondurable Manufacturing	\$2,795,196	\$817,733	\$433,087	5
Durable Manufacturing	\$748,325	\$317,444	\$202,507	1
Transportation and Utilities	\$2,188,294	\$886,941	\$518,122	5
Information	\$720,646	\$443,788	\$191,154	1
Wholesale Trade	\$860,298	\$582,405	\$335,820	3
Retail Trade (including Restaurants)	\$3,801,580	\$2,821,600	\$1,635,001	43
FIRE	\$3,790,344	\$974,880	\$388,130	3
Business Services	\$10,132,804	\$5,877,497	\$4,794,529	49
Health Services	\$864,981	\$605,058	\$511,583	7
Other Services	\$1,695,693	\$857,960	\$689,729	13
TOTAL	\$28,848,400	\$14,633,182	\$10,027,056	133
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				

The Cumulative Ten-Year Impact of Operations Associated with the Cancer Prevention and Research Institute of Texas (CPRIT) on Business Activity in Texas (Based on Historical and Projected Budget Levels and Staffing)

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Person Years)
Agriculture	\$3,643,331	\$1,012,306	\$668,151	7
Mining	\$2,692,535	\$629,232	\$350,554	0
Construction	\$3,681,697	\$1,947,080	\$1,604,548	17
Nondurable Manufacturing	\$22,396,552	\$6,552,097	\$3,470,114	42
Durable Manufacturing	\$5,995,967	\$2,543,526	\$1,622,593	12
Transportation and Utilities	\$17,533,744	\$7,106,628	\$4,151,460	37
Information	\$5,774,188	\$3,555,856	\$1,531,628	10
Wholesale Trade	\$6,893,152	\$4,666,529	\$2,690,766	22
Retail Trade (including Restaurants)	\$30,460,224	\$22,608,115	\$13,100,473	343
FIRE	\$30,370,198	\$7,811,242	\$3,109,901	21
Business Services	\$81,189,263	\$47,093,546	\$38,416,241	395
Health Services	\$6,930,672	\$4,848,040	\$4,099,064	56
Other Services	\$13,586,766	\$6,874,417	\$5,526,465	104
TOTAL	\$231,148,291	\$117,248,614	\$80,341,959	1,065

NOTE: Assumes staffing level stabilizes in fiscal 2017 in line with current budget projections.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

The Annual and Cumulative Ten-Year Impact of Outlays for Prevention and
Screening Associated with the Cancer Prevention and Research Institute of Texas
(CPRIT) on Business Activity in Texas

The Annual Impact of Outlays for Prevention and Screening Associated with the Cancer Prevention and Research Institute of Texas (CPRIT) on Business Activity in Texas (Based on Outlays for Fiscal Year 2017)

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	\$1,841,222	\$511,016	\$337,389	5
Mining	\$1,427,034	\$334,241	\$185,741	1
Construction	\$1,951,466	\$1,026,825	\$846,168	12
Nondurable Manufacturing	\$10,677,544	\$3,126,091	\$1,635,252	27
Durable Manufacturing	\$2,633,944	\$1,027,734	\$672,316	9
Transportation and Utilities	\$7,605,447	\$2,986,887	\$1,730,023	19
Information	\$2,361,779	\$1,453,234	\$626,467	6
Wholesale Trade	\$3,385,569	\$2,290,939	\$1,320,976	15
Retail Trade (including Restaurants)	\$15,499,605	\$11,652,684	\$6,778,249	207
FIRE	\$16,322,518	\$4,134,429	\$1,552,642	16
Business Services	\$4,081,098	\$2,484,076	\$2,026,369	25
Health Services	\$34,520,659	\$24,870,321	\$21,028,087	346
Other Services	\$6,348,193	\$3,291,266	\$2,646,566	64
TOTAL	\$108,656,078	\$59,189,744	\$41,386,247	752
NOTE: Includes effects of leveraged external funds for screening and prevention purposes. SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				

**The Cumulative Ten-Year Impact of Outlays for Prevention and Screening
Associated with the Cancer Prevention and Research Institute of Texas (CPRIT)
on Business Activity in Texas (Based on Reported Outlays
for Fiscal Year 2010-2017 with Outlays for Fiscal Year 2018 and
Beyond Reflecting Budgeted and Stabilized Levels)**

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Person Years)
Agriculture	\$16,727,697	\$4,642,635	\$3,065,218	48
Mining	\$12,964,755	\$3,036,617	\$1,687,480	10
Construction	\$17,729,273	\$9,328,817	\$7,687,527	108
Nondurable Manufacturing	\$97,006,621	\$28,400,870	\$14,856,436	249
Durable Manufacturing	\$23,929,664	\$9,337,074	\$6,108,065	84
Transportation and Utilities	\$69,096,293	\$27,136,181	\$15,717,446	173
Information	\$21,457,012	\$13,202,787	\$5,691,516	53
Wholesale Trade	\$30,758,248	\$20,813,425	\$12,001,206	136
Retail Trade (including Restaurants)	\$140,815,551	\$105,865,868	\$61,581,111	1,876
FIRE	\$148,291,802	\$37,561,721	\$14,105,919	148
Business Services	\$37,077,204	\$22,568,094	\$18,409,781	223
Health Services	\$313,623,836	\$225,949,498	\$191,042,394	3,145
Other Services	\$57,674,008	\$29,901,501	\$24,044,329	577
TOTAL	\$987,151,964	\$537,745,089	\$375,998,429	6,831
NOTE: Assumes percentage leveraging of external funds remains constant over time. SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				

The Annual and Cumulative Ten-Year Impact of Outlays for Research and
Product Development Associated with the Cancer Prevention and Research
Institute of Texas (CPRIT) on Business Activity in Texas

The Annual Impact of Outlays for Research Associated with the Cancer Prevention and Research Institute of Texas (CPRIT) on Business Activity in Texas (Based on Outlays for Fiscal Year 2017)

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	\$19,982,538	\$5,977,440	\$3,955,986	62
Mining	\$17,380,380	\$4,025,507	\$2,212,965	13
Construction	\$31,580,301	\$16,944,271	\$13,963,135	195
Nondurable Manufacturing	\$114,357,041	\$33,167,615	\$17,599,048	298
Durable Manufacturing	\$29,824,312	\$11,694,709	\$7,529,195	106
Transportation and Utilities	\$95,411,120	\$37,735,203	\$21,997,931	246
Information	\$26,353,405	\$16,194,369	\$6,981,038	65
Wholesale Trade	\$36,259,709	\$24,539,183	\$14,149,511	160
Retail Trade (including Restaurants)	\$166,409,810	\$124,906,095	\$72,622,965	2,218
FIRE	\$195,281,318	\$52,873,882	\$17,630,153	181
Business Services	\$43,975,727	\$27,061,863	\$22,075,546	268
Health Services	\$38,563,705	\$26,990,627	\$22,820,825	376
Other Services	\$401,120,370	\$249,525,481	\$214,043,323	5,067
TOTAL	\$1,216,499,735	\$631,636,246	\$437,581,623	9,254

NOTE: Includes effects of leveraged external funds for research purposes.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

**The Cumulative Ten-Year Impact of Outlays for Research Associated with
the Cancer Prevention and Research Institute of Texas (CPRIT) on
Business Activity in Texas (Based on Reported Outlays for
Fiscal Year 2010-2017 with Outlays for Fiscal Year 2018 and
Beyond Reflecting Budgeted and Stabilized Levels)**

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Person Years)
Agriculture	\$175,064,641	\$52,367,642	\$34,657,927	546
Mining	\$152,267,442	\$35,266,990	\$19,387,522	112
Construction	\$276,671,263	\$148,446,748	\$122,329,366	1,713
Nondurable Manufacturing	\$1,001,868,450	\$290,577,537	\$154,183,172	2,615
Durable Manufacturing	\$261,287,258	\$102,455,961	\$65,962,382	925
Transportation and Utilities	\$835,885,488	\$330,593,629	\$192,721,263	2,152
Information	\$230,879,048	\$141,876,944	\$61,160,045	572
Wholesale Trade	\$317,667,005	\$214,984,864	\$123,962,189	1,403
Retail Trade (including Restaurants)	\$1,457,896,577	\$1,094,287,464	\$636,241,173	19,430
FIRE	\$1,710,836,433	\$463,221,799	\$154,455,676	1,587
Business Services	\$385,266,120	\$237,085,764	\$193,401,237	2,345
Health Services	\$337,852,037	\$236,461,679	\$199,930,538	3,291
Other Services	\$3,514,167,909	\$2,186,063,099	\$1,875,208,127	44,387
TOTAL	\$10,657,609,670	\$5,533,690,120	\$3,833,600,617	81,077
NOTE: Assumes percentage leveraging of external funds based on 2010-2017 actual and future budgeted levels. SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				

The Annual and Cumulative Ten-Year Impact of All Direct Outlays for Operations
and Programs Associated with the Cancer Prevention and Research Institute of
Texas (CPRIT) on Business Activity in Texas

**The Annual Impact of All Direct Outlays for Operations and Programs
Associated with the Cancer Prevention and Research Institute of Texas (CPRIT)
on Business Activity in Texas
(Based on Operations and Awards in Fiscal Year 2017)**

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	\$22,278,465	\$6,614,797	\$4,376,764	68
Mining	\$19,143,455	\$4,438,280	\$2,442,457	14
Construction	\$33,991,260	\$18,214,101	\$15,009,558	209
Nondurable Manufacturing	\$127,829,781	\$37,111,439	\$19,667,387	331
Durable Manufacturing	\$33,206,582	\$13,039,888	\$8,404,019	116
Transportation and Utilities	\$105,204,861	\$41,609,030	\$24,246,077	269
Information	\$29,435,830	\$18,091,391	\$7,798,659	72
Wholesale Trade	\$40,505,576	\$27,412,527	\$15,806,308	178
Retail Trade (including Restaurants)	\$185,710,995	\$139,380,379	\$81,036,216	2,467
FIRE	\$215,394,181	\$57,983,190	\$19,570,926	200
Business Services	\$58,189,629	\$35,423,436	\$28,896,444	342
Health Services	\$73,949,344	\$52,466,007	\$44,360,495	729
Other Services	\$409,164,256	\$253,674,707	\$217,379,618	5,143
TOTAL	\$1,354,004,213	\$705,459,172	\$488,994,926	10,139

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

The Cumulative Ten-Year Impact of All Direct Outlays for Operations and Programs Associated with the Cancer Prevention and Research Institute of Texas (CPRIT) on Business Activity in Texas (Based on Actual Operations and Awards in Fiscal Years 2010-2017 and Future Budgeted and Stabilized Levels)

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Person Years)
Agriculture	\$195,435,669	\$58,022,583	\$38,391,296	600
Mining	\$167,924,732	\$38,932,839	\$21,425,556	122
Construction	\$298,082,233	\$159,722,645	\$131,621,441	1,837
Nondurable Manufacturing	\$1,121,271,623	\$325,530,503	\$172,509,723	2,905
Durable Manufacturing	\$291,212,888	\$114,336,560	\$73,693,040	1,021
Transportation and Utilities	\$922,515,526	\$364,836,439	\$212,590,170	2,362
Information	\$258,110,248	\$158,635,586	\$68,383,190	635
Wholesale Trade	\$355,318,406	\$240,464,818	\$138,654,161	1,561
Retail Trade (including Restaurants)	\$1,629,172,352	\$1,222,761,448	\$710,922,757	21,649
FIRE	\$1,889,498,433	\$508,594,762	\$171,671,496	1,756
Business Services	\$503,532,587	\$306,747,405	\$250,227,259	2,963
Health Services	\$658,406,545	\$467,259,217	\$395,071,997	6,492
Other Services	\$3,585,428,683	\$2,222,839,018	\$1,904,778,920	45,069
TOTAL	\$11,875,909,926	\$6,188,683,824	\$4,289,941,005	88,972

NOTE: Includes effects of leveraged external funds for prevention and research and assumes stabilized funding based on 2010-2017 actual and future budgeted levels.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

Annual and Cumulative Ten-Year Impact of Outlays for Prevention and Screening
(Downstream) Associated with the Cancer Prevention and Research Institute of
Texas (CPRIT) on Business Activity in Texas

**The Annual Impact of Outlays for Prevention and Screening (Downstream)
Associated with the Cancer Prevention and Research Institute
of Texas (CPRIT) on Business Activity in Texas
(Based on Outlays for Fiscal Year 2017)**

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	\$9,728,670	\$2,817,936	\$1,752,490	30
Mining	\$51,358,537	\$23,317,140	\$8,185,389	34
Construction	\$22,961,654	\$11,294,497	\$8,679,900	132
Nondurable Manufacturing	\$80,809,595	\$22,446,968	\$11,799,907	139
Durable Manufacturing	\$36,229,195	\$14,954,320	\$10,010,565	104
Transportation and Utilities	\$67,407,426	\$23,347,559	\$13,343,665	146
Information	\$17,340,027	\$11,317,118	\$4,965,340	45
Wholesale Trade	\$23,566,743	\$17,776,463	\$10,040,512	116
Retail Trade (including Restaurants)	\$96,166,455	\$73,880,761	\$42,679,197	1,332
FIRE	\$137,993,694	\$42,558,912	\$15,921,406	158
Business Services	\$42,295,453	\$29,735,606	\$24,116,087	285
Health Services	\$51,402,001	\$39,339,873	\$32,504,834	548
Other Services	\$43,861,263	\$23,030,251	\$17,775,671	417
TOTAL	\$681,120,714	\$335,817,406	\$201,774,961	3,484

NOTE: Based on typical results of screening and prevention measures determined in various studies. Includes effects of leveraged external funds for screening and prevention purposes.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

**The Cumulative Ten-Year Impact of Outlays for Prevention and Screening
Associated with the Cancer Prevention and Research Institute
of Texas (CPRIT) on Business Activity in Texas (Based on Reported Outlays
for Fiscal Year 2010-2017 with Outlays for Future Fiscal Years Reflecting
Budgeted and Stabilized Levels)**

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Person Years)
Agriculture	\$91,205,194	\$26,417,839	\$16,429,397	285
Mining	\$481,480,542	\$218,595,583	\$76,737,102	318
Construction	\$215,262,936	\$105,884,650	\$81,373,092	1,234
Nondurable Manufacturing	\$757,580,913	\$210,437,810	\$110,622,808	1,300
Durable Manufacturing	\$339,644,653	\$140,195,080	\$93,847,923	971
Transportation and Utilities	\$631,937,080	\$218,880,757	\$125,095,370	1,365
Information	\$162,560,810	\$106,096,719	\$46,549,508	425
Wholesale Trade	\$220,935,581	\$166,652,348	\$94,128,673	1,084
Retail Trade (including Restaurants)	\$901,549,758	\$692,623,865	\$400,112,693	12,485
FIRE	\$1,293,675,439	\$398,985,040	\$149,261,400	1,480
Business Services	\$396,515,140	\$278,767,977	\$226,085,617	2,669
Health Services	\$481,888,009	\$368,806,909	\$304,729,179	5,136
Other Services	\$411,194,436	\$215,906,028	\$166,644,927	3,909
TOTAL	\$6,385,430,491	\$3,148,250,605	\$1,891,617,689	32,659
NOTE: Based on typical results of screening and prevention measures determined in various studies. Includes effects of leveraged external funds for screening and prevention purposes.				
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				

The Anticipated Benefits of the Research and Related Programs Associated with the Cancer Prevention and Research Institute of Texas (CPRIT) on Business Activity in Texas

**The Anticipated Annual Benefits of the Research and Related Programs
Associated with the Cancer Prevention and Research Institute
of Texas (CPRIT) on Business Activity in Texas
(Benefits in 2017 Based on Research Awards in Fiscal Years 2010-2017)**

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	\$244,843,329	\$93,158,122	\$69,772,403	758
Mining	\$1,152,278,605	\$536,791,846	\$204,661,714	764
Construction	\$532,615,338	\$276,530,369	\$219,141,998	3,065
Nondurable Manufacturing	\$2,525,010,796	\$1,243,996,715	\$1,010,302,050	4,513
Durable Manufacturing	\$1,040,659,303	\$573,692,418	\$465,180,841	3,256
Transportation and Utilities	\$1,607,721,199	\$640,641,538	\$421,063,879	3,541
Information	\$421,179,563	\$288,981,431	\$149,564,859	1,093
Wholesale Trade	\$593,421,409	\$466,329,274	\$296,531,193	2,874
Retail Trade (including Restaurants)	\$2,317,386,162	\$1,828,232,576	\$1,143,382,620	31,992
FIRE	\$3,243,795,107	\$1,149,076,206	\$564,403,755	3,692
Business Services	\$1,008,854,157	\$733,175,321	\$609,831,275	6,728
Health Services	\$1,174,809,797	\$910,055,512	\$760,031,736	12,478
Other Services	\$1,575,968,667	\$1,118,744,223	\$1,003,410,293	10,052
TOTAL	\$17,438,543,432	\$9,859,405,552	\$6,917,278,617	84,807
NOTE: Based on typical annual rate of return to health-related research, the location of additional researchers to the state, and standard patterns in spinoff companies from research outlays (fully adjusted for attrition and verified for reasonableness with available data). Includes effects of leveraged external research funding.				
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				

**The Anticipated Annual Benefits of the Research and Related Programs
Associated with the Cancer Prevention and Research Institute of
Texas (CPRIT) on Business Activity in Texas
(Impact in Year 10 Assuming Sustainable Level of Research Funding
Achieved Through Conclusion of Program)**

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	\$317,272,742	\$120,716,105	\$90,412,435	983
Mining	\$1,493,145,000	\$695,585,302	\$265,204,625	990
Construction	\$690,173,301	\$358,333,425	\$283,968,458	3,971
Nondurable Manufacturing	\$3,271,958,040	\$1,611,995,109	\$1,309,169,023	5,848
Durable Manufacturing	\$1,348,506,541	\$743,401,780	\$602,790,371	4,220
Transportation and Utilities	\$2,083,316,362	\$830,155,751	\$545,622,754	4,589
Information	\$545,772,659	\$374,467,752	\$193,809,050	1,416
Wholesale Trade	\$768,966,990	\$604,278,532	\$384,250,880	3,724
Retail Trade (including Restaurants)	\$3,002,914,007	\$2,369,059,288	\$1,481,617,410	41,456
FIRE	\$4,203,372,714	\$1,488,995,270	\$731,365,349	4,784
Business Services	\$1,307,292,816	\$950,062,824	\$790,231,213	8,719
Health Services	\$1,522,341,357	\$1,179,267,612	\$984,863,888	16,169
Other Services	\$2,042,170,813	\$1,449,690,497	\$1,300,238,551	13,025
TOTAL	\$22,597,203,344	\$12,776,009,245	\$8,963,544,009	109,894

NOTE: Based on typical annual rate of return to health-related research, the location of additional researchers to the state at the current rate, and standard patterns in spinoff companies from research outlays (fully adjusted for attrition and verified for reasonableness with available data). Includes effects of leveraged external research funding.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

The Anticipated Cumulative Ten-Year Benefits of the Research and Related Programs Associated with the Cancer Prevention and Research Institute of Texas (CPRIT) on Business Activity in Texas (Cumulative Impact Over Ten Years Assuming Sustainable Level of Research Funding Achieved Through Conclusion of Program)

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Person Years)
Agriculture	\$2,107,498,976	\$801,862,351	\$600,568,816	6,527
Mining	\$9,918,285,257	\$4,620,457,789	\$1,761,634,082	6,579
Construction	\$4,584,508,320	\$2,380,246,474	\$1,886,273,721	26,379
Nondurable Manufacturing	\$21,734,133,783	\$10,707,752,644	\$8,696,216,255	38,845
Durable Manufacturing	\$8,957,517,553	\$4,938,080,969	\$4,004,063,132	28,030
Transportation and Utilities	\$13,838,526,031	\$5,514,348,266	\$3,624,324,575	30,483
Information	\$3,625,320,328	\$2,487,419,493	\$1,287,385,648	9,406
Wholesale Trade	\$5,107,899,074	\$4,013,948,314	\$2,552,404,382	24,738
Retail Trade (including Restaurants)	\$19,946,996,253	\$15,736,586,737	\$9,841,712,705	275,374
FIRE	\$27,921,099,165	\$9,890,720,481	\$4,858,128,421	31,778
Business Services	\$8,683,753,457	\$6,310,836,589	\$5,249,147,661	57,914
Health Services	\$10,112,223,419	\$7,833,340,073	\$6,542,004,281	107,402
Other Services	\$13,565,214,810	\$9,629,636,696	\$8,636,895,174	86,522
TOTAL	\$150,102,976,427	\$84,865,236,876	\$59,540,758,852	729,977
NOTE: Based on typical annual rate of return to health-related research, the location of additional researchers to the state at the current rate, and standard patterns in spinoff companies from research outlays (fully adjusted for attrition and verified for reasonableness with available data). Includes effects of leveraged external research funding.				
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				

The Anticipated Gross Benefits of All Prevention and Research Programs
Associated with the Cancer Prevention and Research Institute of Texas (CPRIT)
on Business Activity in Texas

**The Anticipated Gross Annual Benefits of All Prevention and Research Programs Associated with the Cancer Prevention and Research Institute of Texas (CPRIT) on Business Activity in Texas
(Based on Operations and Awards in Fiscal Year 2017)**

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	\$276,850,464	\$102,590,855	\$75,901,657	857
Mining	\$1,222,780,597	\$564,547,266	\$215,289,560	812
Construction	\$589,568,251	\$306,038,968	\$242,831,457	3,406
Nondurable Manufacturing	\$2,733,650,172	\$1,303,555,121	\$1,041,769,344	4,983
Durable Manufacturing	\$1,110,095,081	\$601,686,626	\$483,595,424	3,476
Transportation and Utilities	\$1,780,333,487	\$705,598,128	\$458,653,621	3,956
Information	\$467,955,419	\$318,389,940	\$162,328,858	1,210
Wholesale Trade	\$657,493,728	\$511,518,263	\$322,378,012	3,167
Retail Trade (including Restaurants)	\$2,599,263,612	\$2,041,493,716	\$1,267,098,032	35,791
FIRE	\$3,597,182,981	\$1,249,618,309	\$599,896,086	4,050
Business Services	\$1,109,339,239	\$798,334,363	\$662,843,806	7,354
Health Services	\$1,300,161,142	\$1,001,861,392	\$836,897,065	13,754
Other Services	\$2,028,994,186	\$1,395,449,182	\$1,238,565,582	15,612
TOTAL	\$19,473,668,359	\$10,900,682,129	\$7,608,048,505	98,430

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

The Anticipated Gross Annual Benefits of All Prevention and Research Programs Associated with the Cancer Prevention and Research Institute of Texas (CPRIT) on Business Activity in Texas (Impact in Year 10 Based Upon Attaining Sustainable Levels of Prevention and Research Funding Through Conclusion of Program)

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	\$349,279,877	\$130,148,838	\$96,541,689	1,081
Mining	\$1,563,646,993	\$723,340,722	\$275,832,471	1,038
Construction	\$747,126,215	\$387,842,024	\$307,657,917	4,312
Nondurable Manufacturing	\$3,480,597,416	\$1,671,553,516	\$1,340,636,317	6,318
Durable Manufacturing	\$1,417,942,319	\$771,395,988	\$621,204,954	4,440
Transportation and Utilities	\$2,255,928,649	\$895,112,340	\$583,212,496	5,004
Information	\$592,548,516	\$403,876,261	\$206,573,049	1,534
Wholesale Trade	\$833,039,309	\$649,467,521	\$410,097,700	4,018
Retail Trade (including Restaurants)	\$3,284,791,457	\$2,582,320,428	\$1,605,332,823	45,255
FIRE	\$4,556,760,589	\$1,589,537,373	\$766,857,681	5,142
Business Services	\$1,407,777,897	\$1,015,221,866	\$843,243,744	9,345
Health Services	\$1,647,692,702	\$1,271,073,491	\$1,061,729,217	17,445
Other Services	\$2,495,196,332	\$1,726,395,456	\$1,535,393,839	18,585
TOTAL	\$24,632,328,272	\$13,817,285,823	\$9,654,313,896	123,517
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				

The Anticipated Gross Cumulative Ten-Year Benefits of All Prevention and Research Programs Associated with the Cancer Prevention and Research Institute of Texas (CPRIT) on Business Activity in Texas (Cumulative Impact Over Ten Years Assuming Sustainable Level of Prevention and Research Funding Achieved Through Conclusion of Program)

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Person Years)
Agriculture	\$2,401,872,988	\$888,627,931	\$656,928,590	7,448
Mining	\$10,574,470,859	\$4,879,555,524	\$1,860,658,839	7,027
Construction	\$5,110,365,107	\$2,652,572,728	\$2,104,805,093	29,562
Nondurable Manufacturing	\$23,657,181,903	\$11,256,530,501	\$8,986,152,134	43,221
Durable Manufacturing	\$9,599,940,158	\$5,197,146,175	\$4,174,520,171	30,082
Transportation and Utilities	\$15,430,223,194	\$6,112,799,036	\$3,970,602,055	34,352
Information	\$4,056,194,456	\$2,758,421,038	\$1,405,020,892	10,503
Wholesale Trade	\$5,698,169,295	\$4,430,551,186	\$2,790,656,758	27,474
Retail Trade (including Restaurants)	\$22,542,071,214	\$17,700,273,355	\$10,980,831,295	310,778
FIRE	\$31,180,374,725	\$10,818,988,784	\$5,185,905,133	35,117
Business Services	\$9,599,779,822	\$6,906,232,837	\$5,733,520,793	63,702
Health Services	\$11,259,012,882	\$8,673,758,878	\$7,245,485,687	119,210
Other Services	\$17,726,243,019	\$12,170,854,749	\$10,796,273,841	138,440
TOTAL	\$168,835,899,622	\$94,446,312,723	\$65,891,361,281	856,916
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				

The Anticipated Net Benefits of All Prevention and Research Programs
Associated with the Cancer Prevention and Research Institute of Texas (CPRIT)
on Business Activity in Texas

**The Anticipated Net Annual Benefits of All Prevention and Research
Programs Associated with the Cancer Prevention and Research Institute
of Texas (CPRIT) on Business Activity in Texas
(Based on Operations and Awards in Fiscal Year 2017)**

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	\$254,571,999	\$95,976,059	\$71,524,893	789
Mining	\$1,203,637,142	\$560,108,987	\$212,847,103	798
Construction	\$555,576,991	\$287,824,867	\$227,821,898	3,196
Nondurable Manufacturing	\$2,605,820,391	\$1,266,443,682	\$1,022,101,957	4,652
Durable Manufacturing	\$1,076,888,499	\$588,646,738	\$475,191,406	3,360
Transportation and Utilities	\$1,675,128,625	\$663,989,098	\$434,407,544	3,687
Information	\$438,519,590	\$300,298,549	\$154,530,199	1,138
Wholesale Trade	\$616,988,153	\$484,105,736	\$306,571,705	2,990
Retail Trade (including Restaurants)	\$2,413,552,617	\$1,902,113,337	\$1,186,061,817	33,324
FIRE	\$3,381,788,800	\$1,191,635,118	\$580,325,161	3,850
Business Services	\$1,051,149,610	\$762,910,927	\$633,947,362	7,013
Health Services	\$1,226,211,798	\$949,395,385	\$792,536,570	13,025
Other Services	\$1,619,829,930	\$1,141,774,474	\$1,021,185,964	10,469
TOTAL	\$18,119,664,146	\$10,195,222,957	\$7,119,053,579	88,290
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				

The Anticipated Net Annual Benefits of All Prevention and Research Programs Associated with the Cancer Prevention and Research Institute of Texas (CPRIT) on Business Activity in Texas (Impact in Year 10 Based Upon Attaining Sustainable Levels of Prevention and Research Funding Through Conclusion of Program)

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	\$327,001,412	\$123,534,041	\$92,164,925	1,013
Mining	\$1,544,503,538	\$718,902,442	\$273,390,014	1,024
Construction	\$713,134,955	\$369,627,922	\$292,648,359	4,103
Nondurable Manufacturing	\$3,352,767,636	\$1,634,442,077	\$1,320,968,930	5,987
Durable Manufacturing	\$1,384,735,737	\$758,356,100	\$612,800,935	4,323
Transportation and Utilities	\$2,150,723,788	\$853,503,310	\$558,966,420	4,735
Information	\$563,112,686	\$385,784,870	\$198,774,390	1,461
Wholesale Trade	\$792,533,734	\$622,054,995	\$394,291,392	3,840
Retail Trade (including Restaurants)	\$3,099,080,462	\$2,442,940,048	\$1,524,296,607	42,788
FIRE	\$4,341,366,408	\$1,531,554,182	\$747,286,755	4,942
Business Services	\$1,349,588,269	\$979,798,430	\$814,347,300	9,003
Health Services	\$1,573,743,358	\$1,218,607,485	\$1,017,368,722	16,717
Other Services	\$2,086,032,077	\$1,472,720,749	\$1,318,014,222	13,442
TOTAL	\$23,278,324,058	\$13,111,826,651	\$9,165,318,970	113,378
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				

The Anticipated Net Cumulative Ten-Year Benefits of All Prevention and Research Programs Associated with the Cancer Prevention and Research Institute of Texas (CPRIT) on Business Activity in Texas (Cumulative Impact Over Ten Years Assuming Sustainable Level of Prevention and Research Funding Achieved Through Conclusion of Program)

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Person Years)
Agriculture	\$2,198,704,170	\$828,280,190	\$616,998,213	6,812
Mining	\$10,399,765,799	\$4,839,053,371	\$1,838,371,184	6,897
Construction	\$4,799,771,256	\$2,486,131,124	\$1,967,646,812	27,613
Nondurable Manufacturing	\$22,491,714,696	\$10,918,190,454	\$8,806,839,062	40,145
Durable Manufacturing	\$9,297,162,206	\$5,078,276,050	\$4,097,911,055	29,001
Transportation and Utilities	\$14,470,463,111	\$5,733,229,023	\$3,749,419,945	31,849
Information	\$3,787,881,138	\$2,593,516,211	\$1,333,935,155	9,831
Wholesale Trade	\$5,328,834,654	\$4,180,600,662	\$2,646,533,054	25,822
Retail Trade (including Restaurants)	\$20,848,546,011	\$16,429,210,602	\$10,241,825,398	287,859
FIRE	\$29,214,774,604	\$10,289,705,522	\$5,007,389,821	33,257
Business Services	\$9,080,268,597	\$6,589,604,565	\$5,475,233,279	60,582
Health Services	\$10,594,111,427	\$8,202,146,982	\$6,846,733,460	112,538
Other Services	\$13,976,409,247	\$9,845,542,725	\$8,803,540,101	90,431
TOTAL	\$156,488,406,918	\$88,013,487,481	\$61,432,376,542	762,636
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				

The Potential Annual Impact of a Substantial Reduction in Cancer Incidence as a
Consequence of the Catalytic Effect Resulting from the Initiatives of the Cancer
Prevention and Research Institute of Texas (CPRIT) (as of 2045)

The Potential Annual Impact of a Substantial Reduction in Cancer Incidence as a Consequence of the Catalytic Effect Resulting from the Initiatives of the Cancer Prevention and Research Institute of Texas (CPRIT) on Business Activity in Texas (as of 2045)

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	\$470,398,250	\$136,252,165	\$84,735,958	1,469
Mining	\$2,483,275,278	\$1,127,424,597	\$395,777,881	1,640
Construction	\$1,110,236,199	\$546,108,744	\$419,688,377	6,363
Nondurable Manufacturing	\$3,907,285,524	\$1,085,350,218	\$570,546,179	6,707
Durable Manufacturing	\$1,751,745,077	\$723,067,593	\$484,028,340	5,007
Transportation and Utilities	\$3,259,267,180	\$1,128,895,408	\$645,189,601	7,041
Information	\$838,420,674	\$547,202,504	\$240,082,894	2,190
Wholesale Trade	\$1,139,493,328	\$859,523,116	\$485,476,330	5,591
Retail Trade (including Restaurants)	\$4,649,816,620	\$3,572,264,237	\$2,063,613,943	64,392
FIRE	\$6,672,236,890	\$2,057,797,979	\$769,827,879	7,631
Business Services	\$2,045,059,266	\$1,437,768,642	\$1,166,055,064	13,765
Health Services	\$2,485,376,820	\$1,902,151,799	\$1,571,665,666	26,488
Other Services	\$2,120,768,939	\$1,113,553,001	\$859,484,842	20,160
TOTAL	\$32,933,380,045	\$16,237,360,002	\$9,756,172,954	168,444

NOTE: This scenario assumes that the incidence of and death rate from cancer in Texas over time is reduced to the average of current levels observed in the five states with the lowest incidence and death rates.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

The Potential Annual Impact of a Substantial Reduction in Cancer Incidence as a Consequence of the Catalytic Effect Resulting from the Initiatives of the Cancer Prevention and Research Institute of Texas (CPRIT) on Business Activity in the United States (as of 2045)

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	\$4,501,336,118	\$1,312,429,125	\$805,256,791	13,953
Mining	\$20,423,730,199	\$9,250,931,843	\$3,276,640,187	13,745
Construction	\$9,376,778,617	\$4,631,656,688	\$3,555,909,511	53,964
Nondurable Manufacturing	\$59,052,553,827	\$15,492,971,938	\$8,020,558,905	96,794
Durable Manufacturing	\$18,302,144,017	\$7,373,377,641	\$4,934,361,091	51,323
Transportation and Utilities	\$32,813,618,568	\$10,971,436,225	\$6,175,104,281	65,322
Information	\$7,173,174,603	\$4,682,746,063	\$2,053,689,974	18,693
Wholesale Trade	\$9,582,165,309	\$7,227,855,027	\$4,082,441,144	47,014
Retail Trade (including Restaurants)	\$39,324,288,206	\$30,183,781,290	\$17,431,418,514	544,775
FIRE	\$55,707,619,120	\$17,423,390,160	\$6,676,035,071	66,064
Business Services	\$17,298,636,840	\$12,161,719,712	\$9,863,363,581	116,435
Health Services	\$20,671,290,126	\$15,820,511,155	\$13,071,803,320	220,304
Other Services	\$18,452,960,694	\$9,650,832,215	\$7,470,660,416	175,711
TOTAL	\$312,680,296,245	\$146,183,639,081	\$87,417,242,787	1,484,094
NOTE: This scenario assumes that the incidence of and death rate from cancer in the US over time is reduced to the average of current levels observed in the five states with the lowest incidence and death rates.				
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				

Incremental Impact Associated with Becoming a Major Center of Biomedical
Production as a Partial Consequence of the Catalytic Effect Resulting from the
Initiatives of the Cancer Prevention and Research Institute of Texas (CPRIT) and
Other Initiatives on Business Activity in Texas

The Potential Annual Incremental Impact Associated with Becoming a Major Center of Biomedical Production as a Partial Consequence of the Catalytic Effect Resulting from the Initiatives of the Cancer Prevention and Research Institute of Texas (CPRIT) and Other Initiatives on Business Activity in Texas (Scenario I* as of 2045)

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	\$635,609,691	\$178,706,503	\$117,861,320	1,733
Mining	\$545,129,454	\$129,614,216	\$72,055,645	407
Construction	\$612,829,505	\$327,041,476	\$269,502,548	3,524
Nondurable Manufacturing	\$13,245,528,753	\$5,425,651,973	\$2,639,025,097	25,055
Durable Manufacturing	\$8,202,055,955	\$3,414,490,527	\$2,523,888,531	30,496
Transportation and Utilities	\$2,798,847,276	\$1,122,046,220	\$655,193,576	6,899
Information	\$848,762,675	\$517,267,355	\$222,745,623	1,905
Wholesale Trade	\$1,684,887,897	\$1,139,136,219	\$656,836,092	6,810
Retail Trade (including Restaurants)	\$4,494,332,680	\$3,335,995,509	\$1,933,117,523	55,754
FIRE	\$4,624,518,512	\$1,217,385,180	\$474,938,823	4,516
Business Services	\$1,619,964,124	\$978,133,631	\$797,906,402	9,001
Health Services	\$1,021,085,513	\$713,930,080	\$603,634,494	9,244
Other Services	\$1,957,818,265	\$1,013,035,956	\$815,066,448	18,072
TOTAL	\$42,291,370,298	\$19,512,434,845	\$11,781,772,121	173,415
*This scenario assumes that Texas achieves a concentration in the biomedical industry (pharmaceuticals and medical equipment) by 2045 equivalent to that of the US. Only incremental gains above baseline projections are included. SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				

The Potential Annual Incremental Impact Associated with Becoming a Major Center of Biomedical Production as a Partial Consequence of the Catalytic Effect Resulting from the Initiatives of the Cancer Prevention and Research Institute of Texas (CPRIT) and Other Initiatives on Business Activity in Texas (Scenario II* as of 2045)

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Permanent Jobs)
Agriculture	\$894,095,415	\$252,026,728	\$166,124,921	2,441
Mining	\$757,303,553	\$180,222,458	\$100,079,595	565
Construction	\$845,139,276	\$451,035,499	\$371,681,343	4,859
Nondurable Manufacturing	\$19,760,526,442	\$8,180,967,687	\$3,968,276,949	36,741
Durable Manufacturing	\$9,837,435,604	\$4,097,529,393	\$3,017,247,331	36,556
Transportation and Utilities	\$3,851,277,966	\$1,545,415,397	\$902,821,843	9,514
Information	\$1,188,146,314	\$723,347,554	\$311,436,314	2,661
Wholesale Trade	\$2,312,064,365	\$1,563,264,924	\$901,392,481	9,346
Retail Trade (including Restaurants)	\$6,175,436,847	\$4,580,060,388	\$2,653,400,788	76,619
FIRE	\$6,385,181,980	\$1,691,281,767	\$657,900,848	6,249
Business Services	\$2,290,022,992	\$1,381,653,505	\$1,127,075,220	12,714
Health Services	\$1,398,009,559	\$977,541,373	\$826,520,286	12,657
Other Services	\$2,695,301,053	\$1,395,403,376	\$1,122,966,048	24,886
TOTAL	\$58,389,941,366	\$27,019,750,051	\$16,126,923,967	235,809
*This scenario assumes that Texas achieves a concentration in the biomedical industry (pharmaceuticals and medical equipment) by 2045 equivalent to that of California. Only incremental gains above baseline projections are included. SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group				

Losses from Failing to Extend the Prevention and Research Programs Associated with the Cancer Prevention and Research Institute of Texas (CPRIT) on Business Activity in Texas

The Anticipated Gross Cumulative Ten-Year Losses of Failing to Extend the Prevention and Research Programs Associated with the Cancer Prevention and Research Institute of Texas (CPRIT) on Business Activity in Texas (Cumulative Impact Over Ten Years Assuming Loss of Current Level of Prevention and Research Funding)

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Person Years)
Agriculture	(\$2,901,095,964)	(\$1,076,356,974)	(\$796,800,797)	(8,982)
Mining	(\$12,851,805,598)	(\$5,936,164,435)	(\$2,263,727,156)	(8,536)
Construction	(\$6,184,112,558)	(\$3,210,140,661)	(\$2,546,987,710)	(35,717)
Nondurable Manufacturing	(\$28,703,884,391)	(\$13,709,219,445)	(\$10,964,807,745)	(52,270)
Durable Manufacturing	(\$11,664,504,635)	(\$6,327,540,998)	(\$5,087,866,125)	(36,527)
Transportation and Utilities	(\$18,673,972,774)	(\$7,402,911,337)	(\$4,814,557,198)	(41,482)
Information	(\$4,907,637,825)	(\$3,340,393,067)	(\$1,704,283,247)	(12,696)
Wholesale Trade	(\$6,896,295,972)	(\$5,367,716,431)	(\$3,384,362,254)	(33,230)
Retail Trade (including Restaurants)	(\$27,247,582,715)	(\$21,404,989,779)	(\$13,290,162,461)	(375,236)
FIRE	(\$37,728,459,620)	(\$13,118,448,505)	(\$6,304,605,462)	(42,496)
Business Services	(\$11,639,722,608)	(\$8,380,384,004)	(\$6,958,683,269)	(77,188)
Health Services	(\$13,637,812,490)	(\$10,511,441,175)	(\$8,780,554,720)	(144,300)
Other Services	(\$21,143,384,644)	(\$14,560,331,391)	(\$12,929,037,992)	(161,562)
TOTAL	(\$204,180,271,796)	(\$114,346,038,203)	(\$79,826,436,135)	(1,030,221)

NOTE: Assumes CPRIT and its programs are not extended beyond the initial authorization. Losses are based on a comparison to the situation where CPRIT and all of its programs are continued for an additional ten years beyond the original authorization. All funding levels are sustained at the stabilized levels currently anticipated for the final year of the current program. Measured impacts do not include the residual benefits of the initial ten-year commitment, since those gains will accrue irrespective of whether or not the extension occurs.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group

**The Anticipated Net Cumulative Ten-Year Losses of Failing to Extend The Prevention and Research Programs Associated with the Cancer Prevention and Research Institute of Texas (CPRIT) on Business Activity in Texas
(Cumulative Impact Over Ten Years Assuming Sustainable Level of Prevention and Research Funding Is Extended for an Additional Ten Years)**

Category	Total Expenditures (2017 Dollars)	Gross Product (2017 Dollars)	Personal Income (2017 Dollars)	Employment (Person Years)
Agriculture	(\$2,678,311,315)	(\$1,010,209,007)	(\$753,033,155)	(8,298)
Mining	(\$12,660,371,050)	(\$5,891,781,640)	(\$2,239,302,586)	(8,397)
Construction	(\$5,844,199,962)	(\$3,027,999,647)	(\$2,396,892,128)	(33,622)
Nondurable Manufacturing	(\$27,425,586,582)	(\$13,338,105,054)	(\$10,768,133,875)	(48,960)
Durable Manufacturing	(\$11,332,438,816)	(\$6,197,142,121)	(\$5,003,825,940)	(35,364)
Transportation and Utilities	(\$17,621,924,159)	(\$6,986,821,035)	(\$4,572,096,431)	(38,789)
Information	(\$4,613,279,529)	(\$3,159,479,157)	(\$1,626,296,655)	(11,972)
Wholesale Trade	(\$6,491,240,214)	(\$5,093,591,164)	(\$3,226,299,177)	(31,452)
Retail Trade (including Restaurants)	(\$25,390,472,765)	(\$20,011,185,986)	(\$12,479,800,304)	(350,564)
FIRE	(\$35,574,517,812)	(\$12,538,616,601)	(\$6,108,896,206)	(40,496)
Business Services	(\$11,057,826,322)	(\$8,026,149,643)	(\$6,669,718,828)	(73,773)
Health Services	(\$12,898,319,048)	(\$9,986,781,108)	(\$8,336,949,773)	(137,012)
Other Services	(\$17,051,742,087)	(\$12,023,584,319)	(\$10,755,241,816)	(110,131)
TOTAL	(\$190,640,229,662)	(\$107,291,446,480)	(\$74,936,486,874)	(928,829)

NOTE: Assumes CPRIT and its programs are not extended beyond the initial authorization. Losses are based on a comparison to the situation where CPRIT and all of its programs are continued for an additional ten years beyond the original authorization. All funding levels are sustained at the stabilized levels currently anticipated for the final year of the current program. Measured impacts do not include the residual benefits of the initial ten-year commitment, since those gains will accrue irrespective of whether or not the extension occurs.

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group