Economic Contributions of the Green Industry to the Texas Economy

Report to the Texas Nursery and Landscape Association
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by

Marco A. Palma and Charles R. Hall
Texas A&M AgriLife Extension Service
Texas A&M University System
2124 TAMU. College Station, TX. 77843-2124
mapalma@tamu.edu

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Introduction

Green industry sales in Texas bounced back after the great recession. All green industry sectors experienced an increase in sales during 2013. Total green industry sales are estimated at an ***all-time high of $18.6 billion.*** The Production and manufacturing sector sales increased by almost 16% to a total of $2.14 billion in 2013, up from $1.80 billion in 2012. The landscaping sector also experienced a large growth in sales in 2013 with over 10%. Total landscaping sales were $4.5 billion. Retail sales also increased almost 9% to a total of $11.9 billion in 2013. The net margins attributed to the retail sector accounted for $3.6 billion. This study measures green industry sales in Texas by sector and then estimates economic contributions to the Texas Economy in terms of output, employment and value added.

Background trends

There are so many factors contributing to the overall health of an industry that it's shortsighted to focus solely on one specific element. For the green industry, marketplace trends encompass consumer spending and confidence in general, as well as how and where plants are purchased. At present, independent garden centers (IGCs) are holding their own in most markets and even increasing sales for the better stores, if adequate attention to merchandising, customer service and consumer trends is given. However, many firms that are using the "grow it and they will come" approach are struggling, and many IGCs are looking to complement their business with other non-plant lines.

Supply chain trends have a significant influence on the vitality of the industry, and vice versa. We continue to see a number of structural changes occurring in the green industry. The shakeout that started with the Great Recession has slowed, and all green industry sectors in Texas increased in sales in 2013.

Garden center trends are dependent upon a number of influences, including seasonality, climate, weather, region, competition from mass merchandisers and home centers, and consumer spending in general. The demand in the U.S. for lawn and garden plants and supplies is regional and highly dependent on climate and growing conditions. The good news is that retail sales for building material and garden equipment and supplies dealers, a potential corollary measure of garden supply demand, increased 3.7 percent in the first two months of 2013 compared to the same period in 2012. Personal consumption expenditures of flowers, seeds and potted plants, a major driver for garden centers, are forecast to grow at an annual compounded rate of 5 percent between 2013 and 2017, according to data published by First Research, a provider of industry intelligence.

Consumer desire to spend time at home and extend living space outdoors should drive sales for outdoor patio products. Demand for decorative outdoor products, such as lighting, pavers and fountains, will achieve double-digit growth each year through 2015, according to the Freedonia Group. As the housing industry rebounds and the economy improves, consumers will unleash pent-up demand for landscaping renovations and updates that may have been put off during the recession.

Landscape service trends appear to be improving; in fact, according to First Research, the output of the U.S. landscaping industry is forecast to grow about 5 percent in 2013 compared to 2012. The outlook also calls for industry output to increase at a compounded annual rate of 4 percent through 2016, indicating steady growth in the

longer term. The value of nonresidential construction spending, a driver for landscaping services demand, rose 1.3 percent year-to-date in January 2013 compared to the same period in 2012. The value of residential construction spending, which impacts demand for landscaping services, rose 22.2 percent year-to-date in January 2013 compared to the same period in 2012. Which brings us to a significant driving force: the housing market.

Methodology

In order to estimate economic contributions of the Green Industry to the Texas economy sales by each green industry sector need to be measured. The North American Industry Classification System (NAICS) was used to gather data on *total green industry sales, including all sectors related to the green industry*. The data used in this report were provided by the State Comptrollers Office, baseline data from the Green Industry Research Consortium National Nursery Survey, and **includes industry sales through the end of fiscal year 2013**. Every business in the state and the country is now classified by North American Industry Classification System (NAICS), which replaced the old Standard Industrial Classification (SIC) system. NAICS was developed jointly by the United States, Canada and Mexico to provide new comparability in statistics about business activity across North America. Green industry firms fall within one of the NAICS codes:

Table 1. NAICS Codes for Green Industry Sectors

Industry Sector	NAICS Code
Nursery & Greenhouse	1114
Lawn & Garden Equipment Mfg	333112
Greenhouse Manufacturing (Prefab. Metal Buildings)*	332311
Landscaping Services	561730
Landscape Architectural Services	541320
Flower, Nursery Stock And Florist Supplies Wholesalers	424930
Lawn & Garden Equipment & Supplies Stores	4442
Florists	4531
Building Material & Supplies Dealers*	4441
Food & Beverage Stores*	445
General Merchandise Stores*	452
Farm & Garden Machinery & Equipment Wholesalers*	423820

* Green industry represents a portion of overall business activity (Sectors not included in Previous Scope reports).

Green Industry Sales in Texas

When reporting sales to the State Comptroller's office, each firm must report all sales, including those sales in which sale taxes are collected and those that are not collected (wholesale). This reporting system has an area of potential slippage. For example, since wholesale growers do not collect any sales tax (for the state), some small

and medium size growers are unaware of their reporting responsibilities. Not all of these firms realize that their services are subject to sale taxes. Therefore, unintended non-compliance has been a source of under reporting, which would underestimate green industry sales in Texas. Because of this potential slippage problem, additional data were used to supplement this report's methodology. Table 2 shows Total Green Industry Gross Sales in 2013, and Table 3 shows sales from 2007-2013 for each green industry sector. Table 3 shows sales for the retail industry including gross sales, and also net sales. Net sales represent the margin sales that correspond to the retail sector only.

Table 2. Total Green Industry Gross Sales in 2013

Sector (NAICS code)	Sales	Establishments
Production/Manufacturing	**2,139,713,096**	**3,136**
Nursery & Greenhouse (1114) ^	1,322,133,822	2,759
Lawn & Garden Equipment Manufacturing (333112) ^	798,185,682	333
Prefabricated metal buildings (332311) (Greenhouses) ^*	19,393,593	44
Horticultural Services	**4,536,539,311**	**59,039**
Landscaping Services (561730)	4,298,566,221	56,542
Landscape Architectural Services (541320)	237,973,090	2,497
Wholesale & Retail Trade Horticulture Products (Gross)	**11,940,263,765**	**77,093**
Flower, Nursery Stock and Florist Supplies Wholesalers (424930)	696,560,332	1,738
Lawn & Garden Equipment & Supplies Stores (4442)	5,466,993,461	9,103
Florists (4531)	1,197,362,688	13,668
Building Material & Supplies Dealers (4441)*	1,680,188,154	7,341
Food & Beverage Stores (445)*	418,922,263	10,704
General Merchandise Stores (452)*	1,685,085,083	33,530
Farm & Garden Equipment Wholesalers (423820)*	795,151,784	1,009
Total All Sectors	**18,616,516,173**	**139,268**

^ Estimated from baseline data from National Nursery Survey, and Texas Comptroller's Office Data.

* NAICS represents a portion of Total Green Industry Sales

Table 3. Total Green Industry Sales 2007-2013

	GROWER	LANDSCAPE	RETAIL (Gross)	RETAIL (Net)	TOTAL
2013	$2,139,713,096	$4,536,539,311	$11,940,263,765	$3,615,832,573	**$10,292,084,981**
2012	$1,801,937,654	$4,060,913,366	$10,880,880,465	$3,295,022,856	$9,157,873,876
2011	$1,918,432,053	$3,538,719,690	$10,374,997,040	$3,141,827,767	$8,598,979,510
2010	$1,537,061,928	$3,390,016,982	$9,351,749,314	$2,831,960,872	$7,759,039,782
2009	$1,336,866,584	$3,414,177,793	$9,039,697,678	$2,737,463,255	$7,488,507,632
2008	$1,575,251,701	$3,903,651,168	$8,599,018,918	$2,604,013,890	$8,082,916,760
2007	$1,498,509,647	$3,567,729,013	$8,431,798,582	$2,553,375,081	$7,619,613,741

Total industry sales, including grower, landscaping and retailing sales increased 10% in 2013 for a total of $18.6 billion in gross sales. The grower sector experienced an increase of 15.8% to a total of $2.1 billion. The landscaping sector increased sales by 10.4% to a total of $4.5 billion. Gross retail sales increased 8.9% to a total of $11.9 billion in 2013. Figures 1, 2, 3 and 4 represent industry sales for growers, landscaping, retailing (gross) and total gross industry sales respectively.

Figure 1. Grower Sales 2004-2013

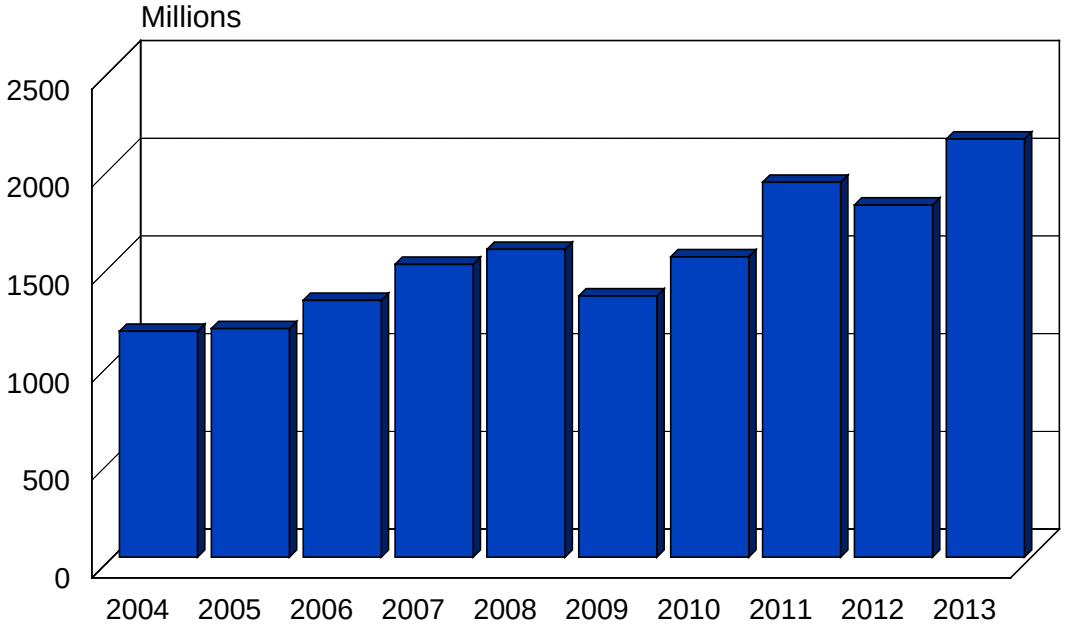


Figure 2. Landscaping Sales 2004-2013

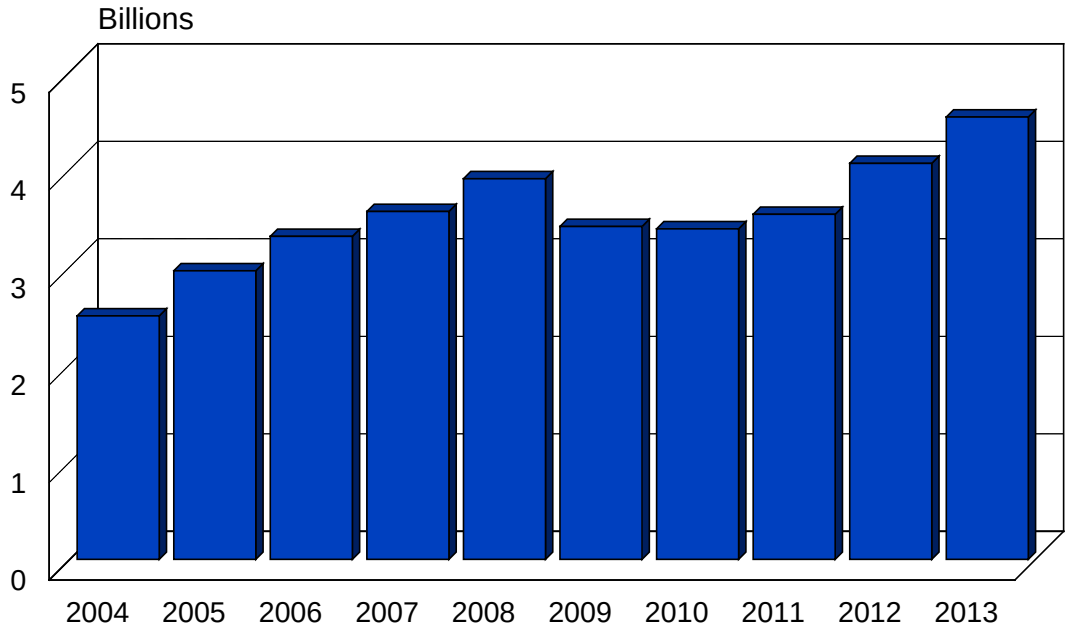


Figure 3. Retailing Sales 2004-2013

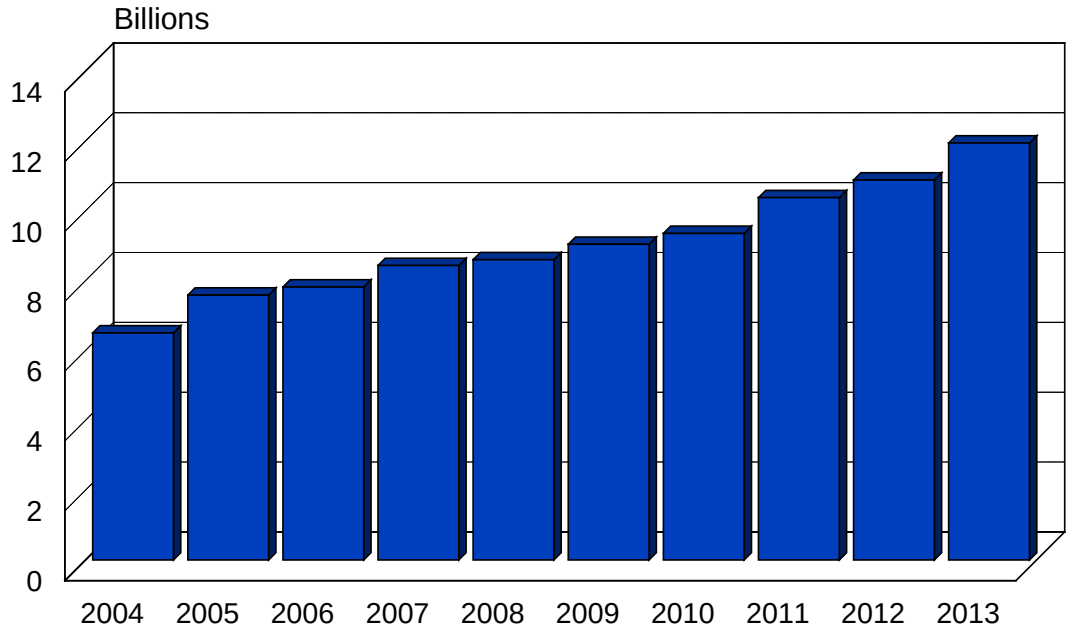


Figure 4. Total Industry Sales 2004-2013

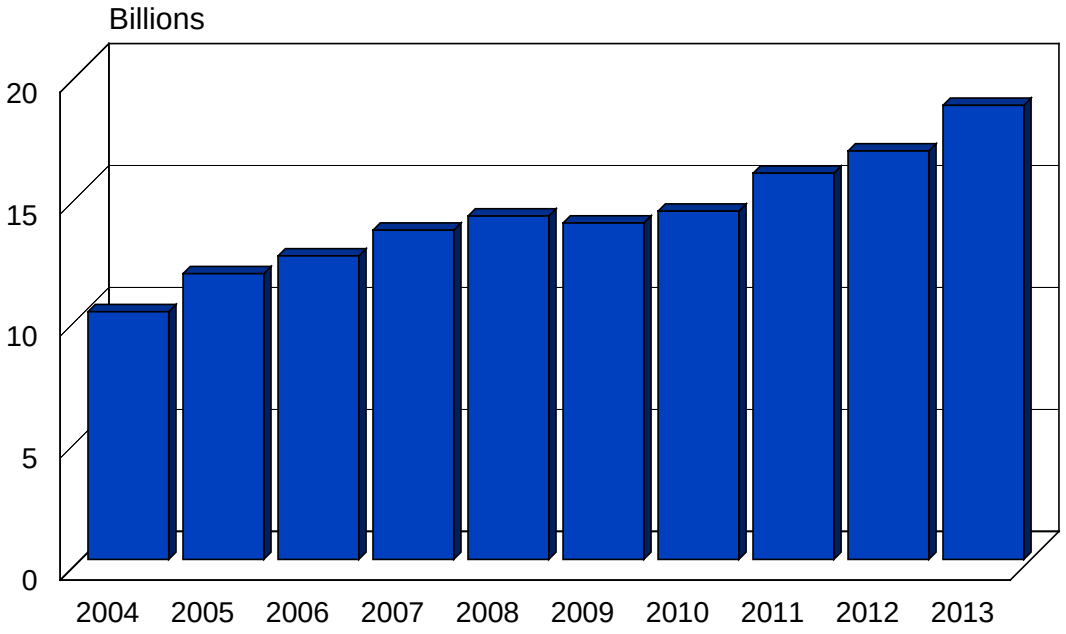


Table 4 presents green industry sales by sector and by major Metropolitan Statistical Area (MSA). There are 27 MSAs in Texas. The major MSAs are, Austin, Dallas, Ft. Worth, Houston, El Paso, and San Antonio. The economic scope reports sales in five of the major MSAs; together, the five major MSAs included in this report represent more than half of the total industry sales as shown in Figure 5. Houston and Dallas hold the largest share of green industry sales in 2012 with 20.51 and 14.41 percent respectively. Figure 6 is a graphical representation of grower, landscaping and retailing sales by MSA in Texas.

Table 4. Total Green Industry Sales by Metropolitan Statistical Area (MSA), 2013

MSA	GROWER	LANDSCAPE	RETAIL(Gross)	TOTAL	% OF TOTAL
Austin	60,359,927	483,479,915	795,684,414	1,339,524,256	7.20%
Dallas	166,374,481	947,198,981	1,568,270,425	2,681,843,887	14.41%
Ft Worth	111,628,317	300,650,977	926,707,669	1,338,986,963	7.19%
Houston	195,813,909	1,667,981,905	1,954,334,221	3,818,130,036	20.51%
San Antonio	94,633,078	287,106,396	853,194,753	1,234,934,227	6.63%
Other	1,510,903,383	850,121,137	5,842,072,283	8,203,096,804	44.06%
Total	2,139,713,096	4,536,539,311	11,940,263,765	**18,616,516,173**	100.00%

Figure 5. Total Green Industry Sales in Texas by MSA in 2013

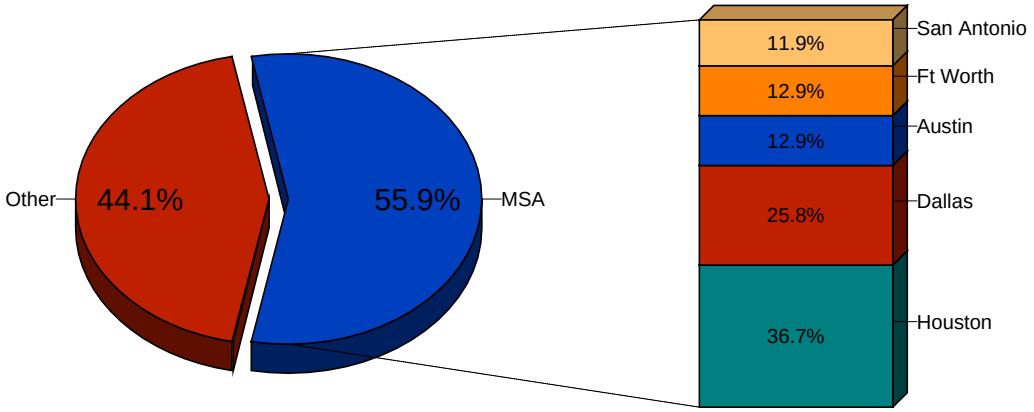
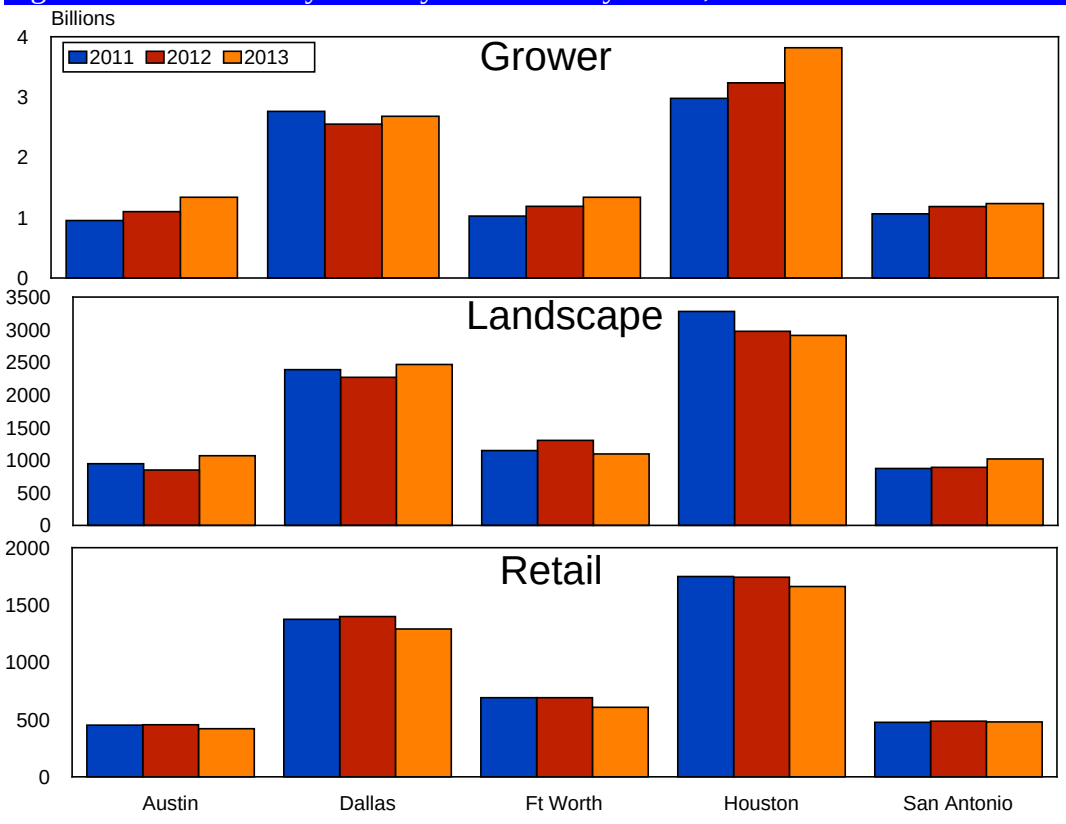


Figure 6. Green Industry Sales by Outlet and by MSA , 2011-2013



Economic Contributions of the Green Industry to the Texas Economy

The net sales data from the previous section was used to estimate total economic contributions of the Green Industry to the Texas Economy. To evaluate the economic impact contributions of the green industry to the Texas economy, economic models were developed using the Implan software system and associated Texas datasets (MIG, 2010). The Implan system includes more than 500 industries. Input-Output models represent the structure of a regional economy in terms of transactions, employees, households, and government institutions (Miller & Blair, 1985).

The economic multipliers derived from the Implan model were used to estimate the total economic activity generated in the state by sales *(output)* to final demand or exports. This includes the effects of intermediate purchases by green industry firms from other economic sectors *(indirect effects)* and the effects of green industry employee household consumer spending *(induced effects)*, in addition to direct sales by industry firms. The wholesale and retail sectors use products from the production/manufacturing and horticultural services sectors; therefore, when calculating the impacts for the wholesale and retail trade horticulture products, output (retail sales) are reduced to reflect only the gross margin on sales to those sectors, otherwise we would be double counting the economic impact stemming from those products.

Total economic contributions of the Green Industry in Texas were estimated at $20.3 billion in output; 216,599 jobs, and $11.7 billion in value added as shown in Table 5. For the production and manufacturing sectors, including nursery and greenhouse, lawn and garden equipment manufacturing, and metal building manufacturers, total output impacts were $4.1 billion; employment impacts were 28,019 jobs; and value added impacts were $2.2 billion. For the horticultural services sectors, including landscaping services and landscape architecture services, total output impacts were $9.3 billion; employment impacts were 111,725 jobs; and value added impacts were $4.9 billion. For the wholesale and retail trade sectors, total output impacts were $6.9 billion; employment impacts were 76,855 jobs; and value added impacts were $4.6 billion. The largest economic impact contributions for individual sectors were landscaping services, lawn and garden stores and nursery and greenhouse.

Table 5. Economic Contributions of the Green Industry in Texas, 2013

	Output ($Mn)	Employment (jobs)	Value Added ($Mn)
Production & Manufacturing	4,122	28,019	2,223
Nursery & Greenhouse	2,837	23,600	1,716
Lawn & Garden Equipment Manufacturing	1,249	4,246	490
Prefabricated Metal Buildings[1]	36	174	17
Horticultural Services	9,280	111,725	4,949
Landscaping Services	8,790	107,896	4,639
Landscape Architecture Services	491	3,829	311
Wholesale & Retail Trade Horticulture Products[2]	6,963	76,855	4,561
Flower Nursery Stock & Florist Supplies Wholesalers	212	1,204	139
Lawn & Garden Equipment & Supplies Stores	3,443	34,515	2,214
Florists	947	15,609	655
Building Material & Supplies Dealers[1]	1,058	10,608	681
Food & Beverage Stores[1]	224	2,823	146
General Merchandise Stores[1]	836	10,723	567
Farm & Garden Equipment Wholesalers[1]	242	1,374	159
Total (All Sectors)	20,366	216,599	11,734

** Totals may not equal due to rounding*

Figure 7. Green Industry Economic Contributions to the Texas Economy in 2013

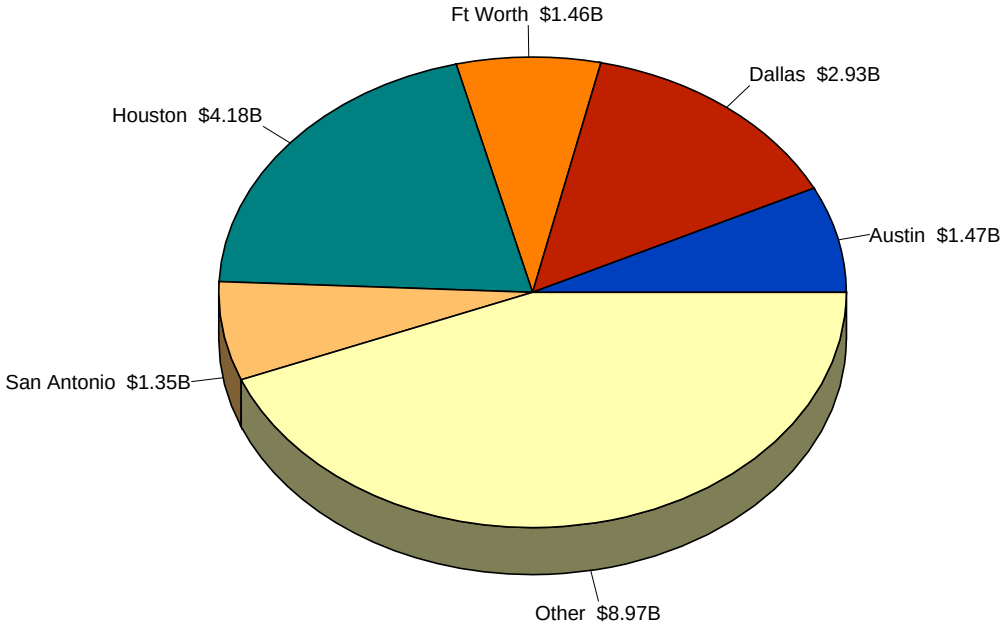
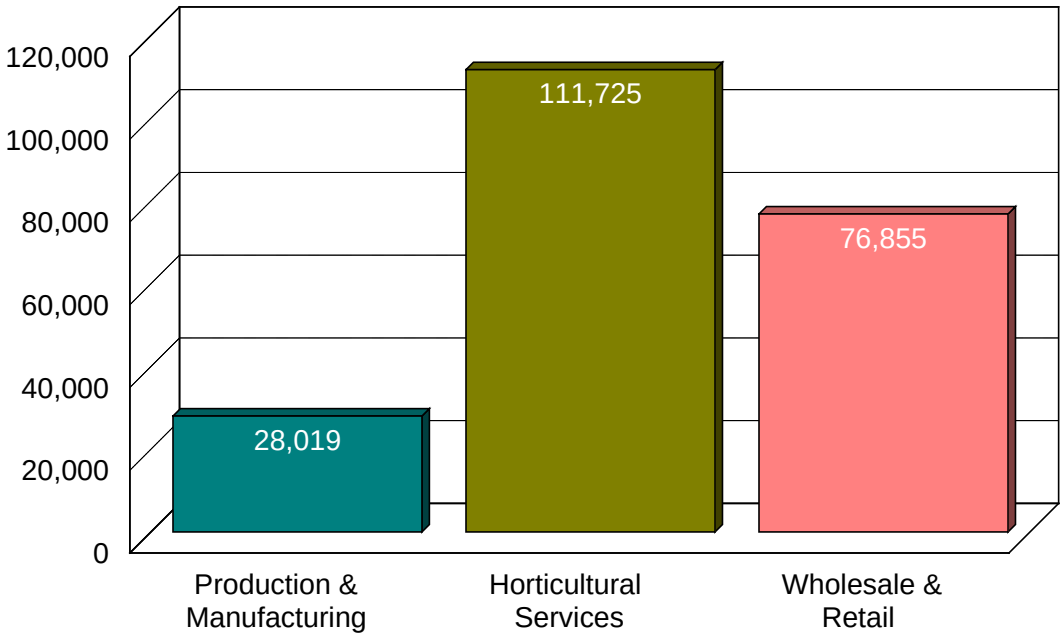


Figure 8. Number of Jobs Created by the Green Industry in Texas 2013



Economic impact results are also reported by major metropolitan statistical area (MSA) as summarized in Table 6. The MSAs with the greatest economic impact contributions to the State's economy are Houston and Dallas.

Table 6. Economic Impact Contributions of the Green Industry in Texas by MSA 2012

	Output ($Mn)	Employment (jobs)	Value Added ($Mn)
Austin	1,465	15,585	844
Dallas	2,934	31,203	1,690
Ft. Worth	1,465	15,579	844
Houston	4,177	44,423	2,407
San Antonio	1,351	14,368	778
Other	8,974	95,441	5,170
Total	20,366	216,599	11,734

** Totals may not equal due to rounding*

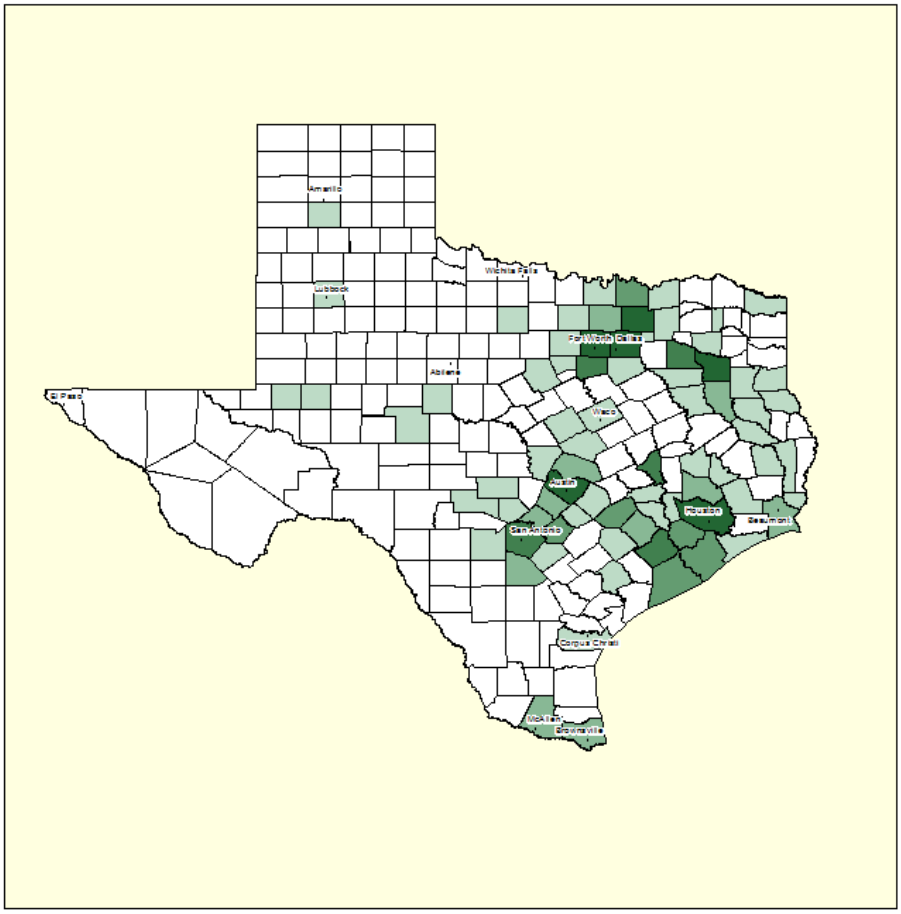
Measures of economic activity.

Sales or output is the dollar volume of a good or service produced or sold. **Final Demand** is sales to final consumers, including households, governments, and exports. **Intermediate sales** are sales to other industrial sectors. **Income** is the money earned within the region from production and sales. **Total income** includes personal income (wage and salary income, including income of sole proprietor's profits and rents). **Jobs or employment** is a measure of the number of jobs required to produce a given volume of sales/production, expressed as full time equivalents, or as the total number including part time and seasonal positions. **Value Added** is the sum of total income and indirect business taxes.

Appendix – Total Green Industry County Sales Estimates for 2013

County	Sales	County	Sales	County	Sales	County	Sales	County	Sales
Anderson	19,440,285	Deaf Smith	132,766,384	Hutchinson	1,759,915	Navarro	28,128,314	Val Verde	7,494,929
Andrews	2,031,638	Delta	296,681	Irion	-	Newton	421,052	Van Zandt	107,795,880
Angelina	59,085,309	Denton	418,000,062	Jack	291,828	Nolan	2,410,596	Victoria	109,010,614
Aransas	12,019,612	De Witt	-	Jackson	18,272,721	Nueces	251,155,721	Walker	36,473,356
Archer	14,772,127	Dickens	92,540	Jasper	13,438,462	Ochiltree	2,543,834	Waller	84,782,079
Armstrong	-	Dimmit	1,874,460	Jeff Davis	49,069	Oldham	-	Ward	2,811,508
Atascosa	48,147,859	Donley	112,787	Jefferson	147,526,229	Orange	30,476,283	Washington	46,067,109
Austin	92,132,349	Duval	207,438	Jim Hogg	262,758	Palo Pinto	12,701,165	Webb	102,243,367
Bailey	51,933,855	Eastland	12,425,511	Jim Wells	8,265,795	Panola	10,040,147	Wharton	198,905,568
Bandera	3,888,346	Ector	69,286,337	Johnson	176,348,127	Parker	70,572,750	Wheeler	287,949
Bastrop	36,089,948	Edwards	38,724	Jones	13,509,266	Parmer	187,741	Wichita	85,152,131
Baylor	60,428	Ellis	78,170,730	Karnes	7,005,308	Pecos	2,404,268	Wilbarger	4,347,281
Bee	19,396,635	El Paso	-	Kaufman	131,243,876	Polk	19,403,077	Willacy	1,041,520
Bell	145,146,720	Erath	45,838,143	Kendall	58,043,930	Potter	87,491,907	Williamson	496,720,328
Bexar	1,031,096,768	Falls	1,249,010	Kenedy	-	Presidio	605,622	Wilson	24,933,348
Blanco	1,049,418	Fannin	14,838,923	Kent	-	Rains	1,902,142	Winkler	311,724
Borden	-	Fayette	64,186,231	Kerr	33,894,456	Randall	92,536,230	Wise	50,806,013
Bosque	3,718,752	Fisher	6,492	Kimble	263,274	Reagan	58,830	Wood	24,056,946
Bowie	105,093,031	Floyd	4,931,222	King	-	Real	132,699	Yoakum	1,154,190
Brazoria	183,529,913	Foard	-	Kinney	9,129	Red River	409,179	Young	5,854,933
Brazos	253,595,759	Fort Bend	341,798,717	Kleberg	9,125,261	Reeves	1,293,286	Zapata	691,782
Brewster	1,621,127	Franklin	3,859,176	Knox	2,534,433	Refugio	202,367	Zavala	193,291
Briscoe	1,936	Freestone	14,113,657	Lamar	54,414,875	Roberts	-		
Brooks	512,639	Frio	1,717,903	Lamb	32,427,177	Robertson	2,127,606		
Brown	9,242,219	Gaines	39,903,431	Lampasas	12,671,756	Rockwall	38,340,515		
Burleson	34,751,762	Galveston	231,413,843	La Salle	-	Runnels	5,357,339		
Burnet	28,670,086	Garza	80,521	Lavaca	8,743,068	Rusk	16,177,795		
Caldwell	17,793,859	Gillespie	24,417,211	Lee	14,476,189	Sabine	1,047,100		
Calhoun	5,546,992	Glasscock	-	Leon	1,601,842	San Augustine	299,403		
Callahan	5,887,322	Goliad	152,604	Liberty	42,891,732	San Jacinto	1,172,534		
Cameron	122,917,767	Gonzales	15,625,263	Limestone	11,636,666	San Patricio	122,301,702		
Camp	1,450,219	Gray	17,521,475	Lipscomb	44,814	San Saba	165,199		
Carson	903,092	Grayson	91,543,069	Live Oak	3,432,786	Schleicher	41,146		
Cass	8,439,065	Gregg	150,721,920	Llano	2,690,881	Scurry	5,070,439		
Castro	29,163,025	Grimes	15,250,615	Loving	-	Shackelford	92,220		
Chambers	61,587,577	Guadalupe	103,996,114	Lubbock	216,584,742	Shelby	18,989,398		
Cherokee	46,333,128	Hale	68,127,702	Lynn	65,123	Sherman	52,724		
Childress	1,014,512	Hall	38,145	Madison	978,084	Smith	351,060,315		
Clay	493,607	Hamilton	2,064,966	Marion	238,037	Somervell	725,474		
Cochran	14,098	Hansford	17,057,220	Martin	104,049	Starr	9,998,370		
Coke	155,814	Hardeman	127,192	Mason	239,690	Stephens	744,174		
Coleman	866,969	Hardin	12,966,148	Matagorda	45,918,061	Sterling	-		
Collin	629,142,370	Harris	3,074,339,389	Maverick	10,870,195	Stonewall	18,964		
Collingsworth	11,328	Harrison	76,427,018	McCulloch	7,839,918	Sutton	174,830		
Colorado	40,111,114	Hartley	-	McLennan	245,194,694	Swisher	158,239		
Comal	98,352,810	Haskell	236,707	McMullen	-	Tarrant	1,441,819,461		
Comanche	7,067,919	Hays	100,519,451	Medina	16,190,915	Taylor	102,190,632		
Concho	-	Hemphill	462,722	Menard	36,940	Terrell	-		
Cooke	131,401,699	Henderson	37,721,015	Midland	103,776,120	Terry	53,353,790		
Coryell	16,928,888	Hidalgo	287,383,128	Milam	5,050,289	Throckmorton	5,840		
Cottle	-	Hill	28,496,567	Mills	605,094	Titus	21,081,838		
Crane	-	Hockley	35,027,359	Mitchell	258,307	Tom Green	122,780,212		
Crockett	81,448	Hood	24,420,498	Montague	9,500,855	Travis	999,664,563		
Crosby	19,748,624	Hopkins	55,838,217	Montgomery	333,655,663	Trinity	1,334,677		
Culberson	45,072	Houston	20,208,257	Moore	252,770,171	Tyler	12,098,105		
Dallam	33,671,613	Howard	24,032,430	Morris	3,067,218	Upshur	9,982,452		
Dallas	1,931,503,902	Hudspeth	47,581	Motley	-	Upton	33,265		
Dawson	1,666,686	Hunt	40,785,597	Nacogdoches	32,088,522	Uvalde	7,840,946		

Grower Sales



Grower Sales for 2013

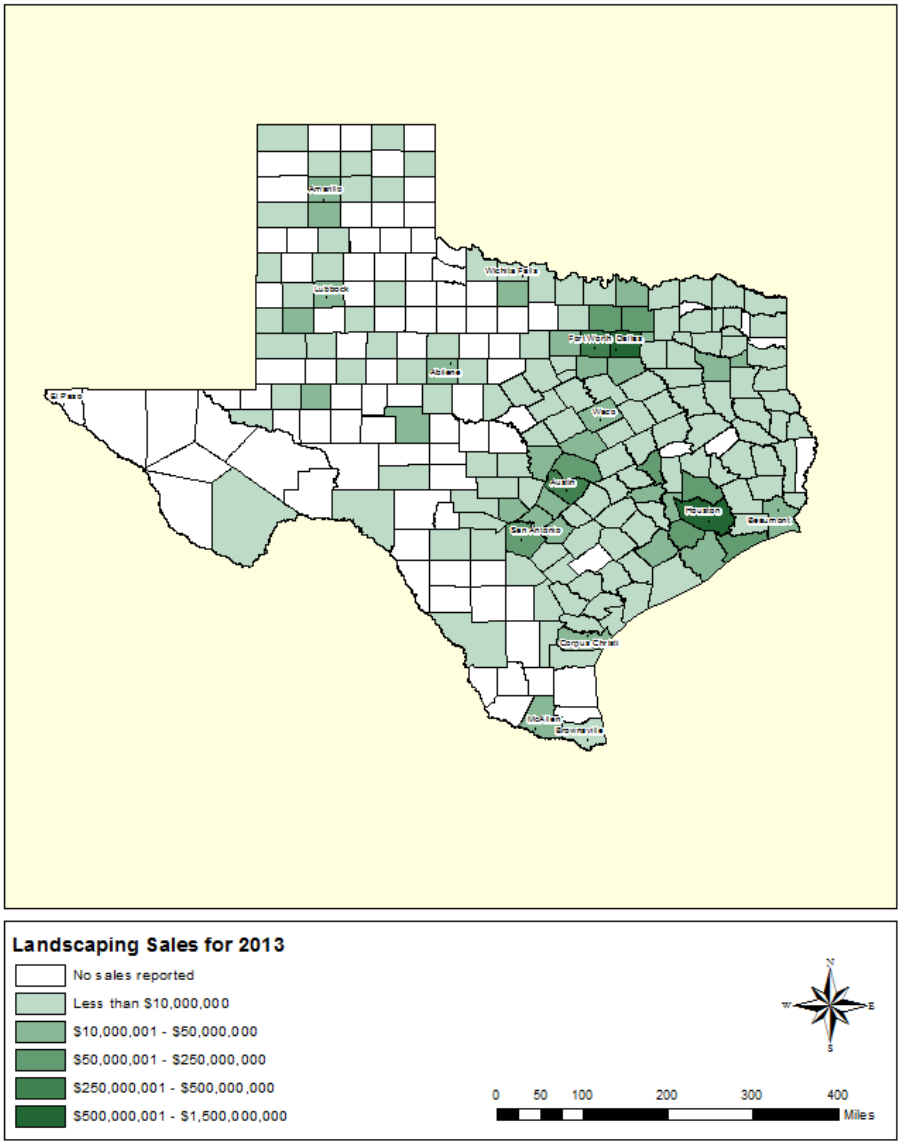
- No sales reported
- Less than $10,000,000
- $10,000,001 - $25,000,000
- $25,000,001 - $50,000,000
- $50,000,001 - $100,000,000
- $100,000,001 - $350,000,000

N W E S

0 50 100 200 300 400 Miles

Developed by Daniel Hanselka, Texas A&M AgriLife Extension Service

Landscaping Sales



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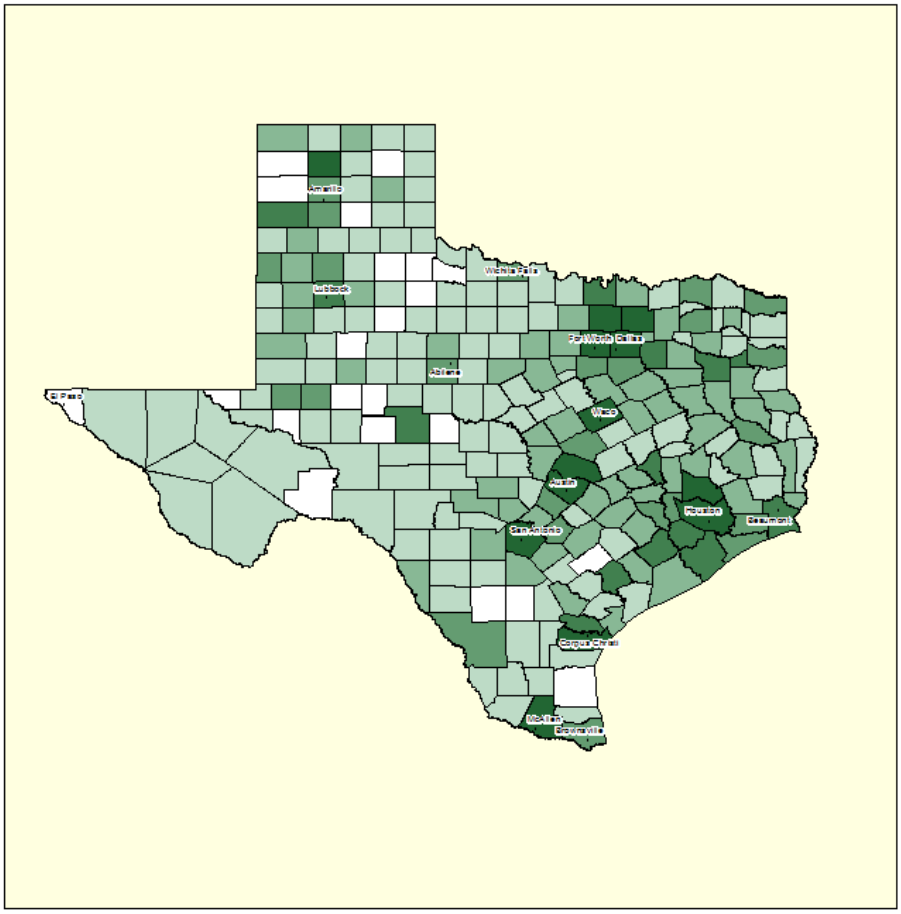
Retail Sales



Retail Sales for 2013

- No sales reported
- Less than $10,000,000
- $10,000,001 - $50,000,000
- $50,000,001 - $100,000,000
- $100,000,001 - $200,000,000
- $200,000,001 - $1,500,000,000

N W E S

0 50 100 200 300 400 Miles

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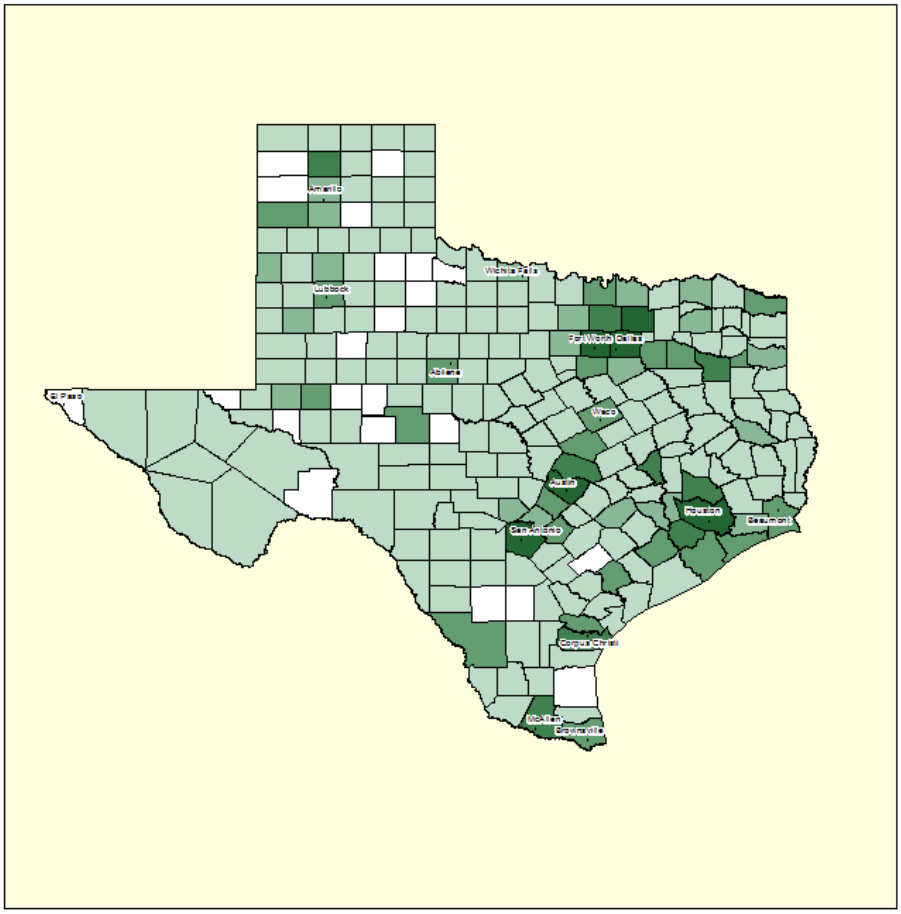
Total Sales



Total Sales for 2013

- No sales reported
- Less than $50,000,000
- $50,000,001 - $100,000,000
- $100,000,001 - $250,000,000
- $250,000,001 - $500,000,000
- $500,000,001 - $3,250,000,000

N W E S

0 50 100 200 300 400 Miles

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