

THE ECONOMIC IMPACT OF NEW BRAUNFELS' HOSPITALITY INDUSTRY 2024

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New Braunfels Convention and Visitors Bureau

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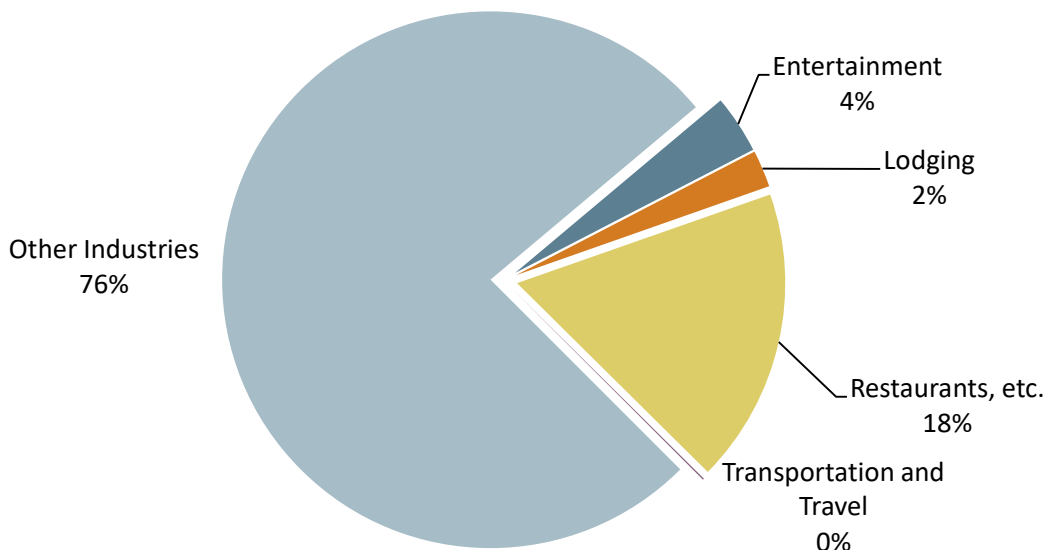
Highlights

- The economic impact of New Braunfels' hospitality industry was \$1.3 billion in 2024 - an increase of 3% from the 2023.
- In 2024, the hospitality industry employed 12,019 direct workers and supported another 3,985 indirect workers in spinoff jobs in the community.
- The New Braunfels hospitality industry paid \$226.2 million in direct wages and supported another \$155.6 million in wages to indirect workers.
- The hospitality industry contributed \$29.8 million in taxes and other revenue to the City of New Braunfels and in total contributed \$55.7 million in taxes and other revenue to all local taxing districts.

Summary of Hospitality Industry					
	Direct Employment	Direct Annual Wages	Direct Average Annual Wage	Direct Economic Output	Value Added
Entertainment	1,788	\$40,219,655	\$22,499	\$151,811,862	\$138,904,614
Lodging	1,133	\$29,798,407	\$26,295	\$129,855,338	\$114,960,931
Restaurants, etc.	9,057	\$154,431,475	\$17,051	\$533,938,191	\$414,039,876
Transportation and Travel	41	\$1,789,304	\$43,399	\$5,517,058	\$4,608,833
Total	12,019	\$226,238,841	\$18,823	\$821,122,450	\$672,514,254

Total estimated employment in New Braunfels was 50,907 in 2024 meaning the direct hospitality industry in total accounted for 23.6% of total area employment.

Direct Hospitality Employment vs. Total Area Employment



Introduction

New Braunfels offers residents and visitors a wide range of recreational and entertainment opportunities including many annual events for the whole family. As a water recreation paradise, New Braunfels boasts one of the world's best water parks and two beautiful rivers perfect for fishing, tubing or swimming. The historic district of Gruene offers year-round music, dancing, shopping and dining. The annual Salute to Sausage, Wurstfest, provides entertainment food and fun while celebrating the city's German heritage and attracts more than 200,000 attendees each year. Traditionally, New Braunfels has attracted 6.8 million visitors per year to the city. The hospitality industry that draws and accommodates these visitors plays an important and significant role in the local area economy. Just a few of the ways this industry benefits the community are detailed below.

Employment

The hospitality industry employs thousands of individuals in full and part-time positions in New Braunfels. Occupations included in the hospitality industry include cashiers, attendants, chefs, operations managers, marketing managers and accountants among others.

Multiplier Effect

Tourist dollars spent by visitors in New Braunfels ripple through the local economy supporting many indirect and induced businesses and organizations. A portion of each new tourist dollar is re-spent by local firms who purchase goods and services supporting other local businesses. Ultimately, the total impact of these tourist expenditures is greater than just the expenditures themselves.

Economic Diversification

A strong hospitality industry and resulting tourist traffic help diversify New Braunfels' local economy. The hospitality industry acts as an insurance policy against economic turmoil which may affect the area's other primary industries.

Improved Quality of Life for Residents

As a result of visitor spending, residents enjoy a vibrant community composed of a wide variety of restaurants and entertainment establishments right in their backyard.

Generous Philanthropy

Firms in the hospitality industry donate significantly to the community with charitable donations, scholarships and in-kind donations. This philanthropy enriches the community and the lives of New Braunfels' residents.

Introduction

About this Report

This report analyzes the hospitality industry's impact on New Braunfels. The hospitality industry has been defined for this report as businesses in industries that derive significant earnings from tourists or out-of-town visitors. Travel accommodations from hotels, motels, bed and breakfasts, short-term rentals, and campgrounds are included as well as water recreation and river outfitters. Restaurants and other dining establishments also contribute significantly to the hospitality industry as defined in this study. A full list of the industries considered in this study is provided in the back of this report by North American Industrial Classification System (NAICS) code. While some of the spending and economic activity at these businesses is made by residents of New Braunfels, the industries and businesses included in this analysis are typically focused on out-of-town visitors and in many cases would not exist in New Braunfels except for out-of-town visitors.

The primary source of data used to estimate the hospitality industry's economic impact was the 2024 state sales tax allocation for the City of New Braunfels. Understanding some of the direct economic activity is not subject to this sales tax, additional data sources were used. Even after collecting and analyzing supplemental data the real impact of the hospitality industry is still likely understated. A full discussion of the methodology used in this analysis is provided at the end of this report.

This study was prepared by Impact DataSource, a 30-year-old Austin-based economic consulting, research and analysis firm. The firm has conducted thousands of economic impact analyses of numerous projects across the country, including several in New Braunfels. In addition, the firm has developed economic impact analysis computer programs for more than 150 clients.

New Braunfels' Hospitality Industry

As a top tourist destination in Texas, New Braunfels receives millions of dollars in direct spending from out-of-town visitors each year. This direct economic activity stimulates the indirect businesses that provide goods and services to the hospitality industry. The sales and purchases related to tourism in New Braunfels supports thousands of jobs and millions in worker earnings. The main economic impacts are reported in terms of economic output, employment and workers earnings. Economic output is the total value of the goods and services produced by the industry. Employment includes both full and part-time jobs in the industry. Workers' earnings or earnings are the salaries or wages paid to the workers in the hospitality industry.

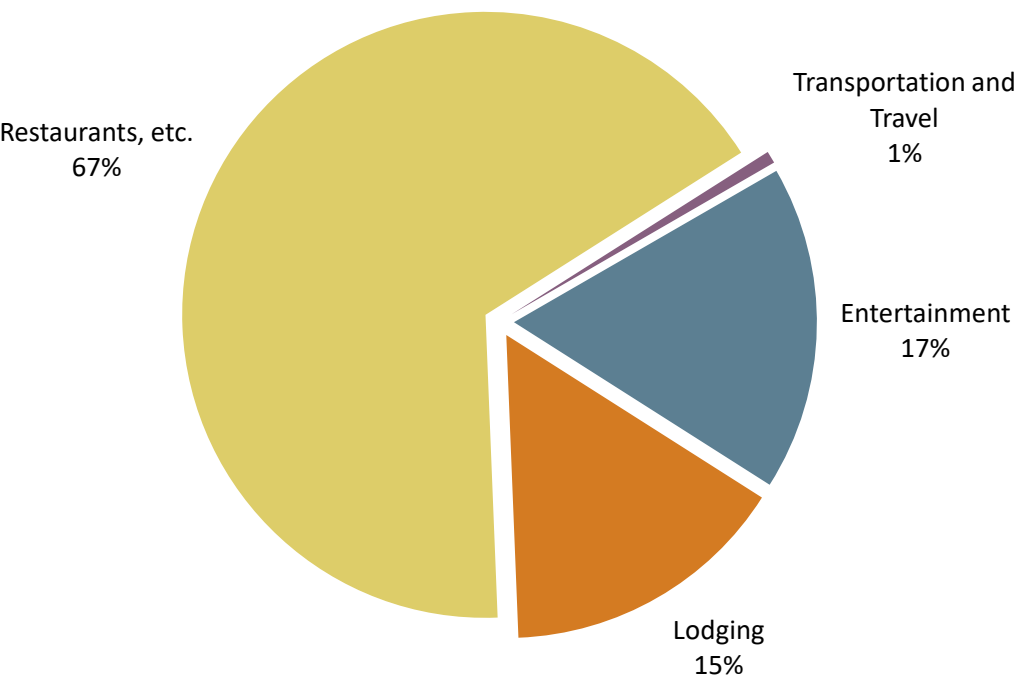
The economic impact calculated in this study can be categorized into two main types of impacts. First, the direct economic impacts are defined as those that result directly from businesses in the hospitality industry. Second, this economic impact analysis calculates the indirect and induced impacts that result from the businesses in the hospitality industry. Indirect jobs and salaries are supported in area firms, such as maintenance companies and service firms, which may supply goods and services to the industry. In addition, induced jobs and salaries are supported in local businesses, such as retail stores, gas stations, banks, restaurants, and service companies that may supply goods and services to workers and their families. For simplicity, this report refers to direct and indirect impacts but it should be noted that the indirect portion includes both indirect and induced impacts.

New Braunfels' Hospitality Industry in 2024

Economic Output

The hospitality industry’s impact during 2024 was \$1.3 billion. The total economic output of \$1.3 billion includes \$821.1 million in direct economic impact activity and \$474.3 million in indirect or spin-off output. Clearly, the hospitality industry plays an important role in the economy of New Braunfels. The chart below illustrates the total economic impact of the hospitality industry by sub-category.

Total Economic Output: \$1,295,451,641



Economic Output - Detail

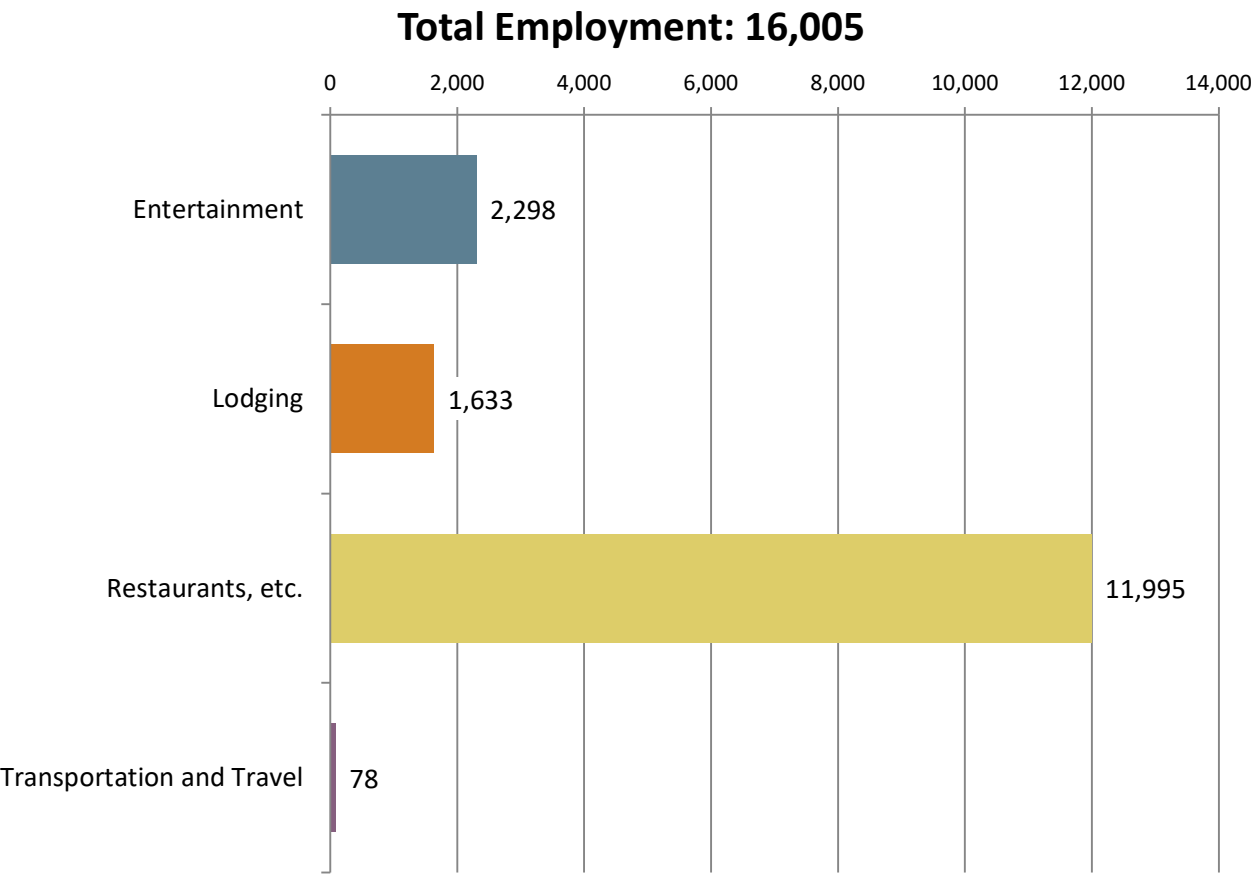
The table below provides more detail on the economic output including the direct, indirect and induced portions of industry impact by category.

Economic Output by Hospitality Industry Category			
	Direct	Indirect & Induced	Total
Entertainment	\$151,811,862	\$72,913,055	\$224,724,917
Lodging	\$129,855,338	\$68,901,243	\$198,756,581
Restaurants, etc.	\$533,938,191	\$329,560,072	\$863,498,263
Transportation and Travel	\$5,517,058	\$2,954,822	\$8,471,880
Total	\$821,122,450	\$474,329,191	\$1,295,451,641

New Braunfels' Hospitality Industry in 2024

Employment

The businesses that make up the hospitality industry support 16,005 jobs. This represents 31.4% of total employment in New Braunfels. The hospitality industry directly supports 12,019 jobs and another 3,985 jobs in indirect employment.



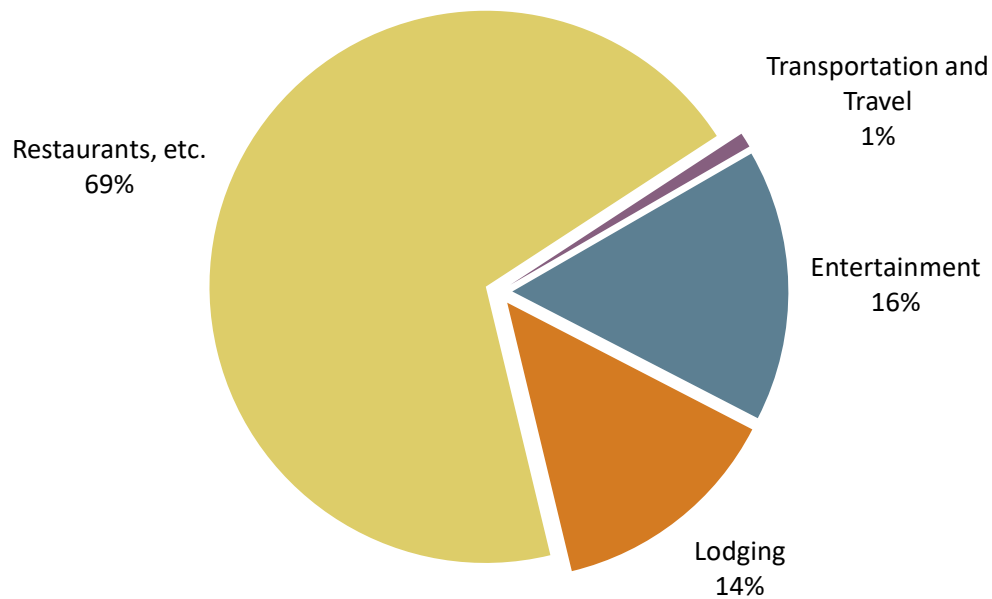
Employment by Hospitality Industry Category			
	Direct	Indirect & Induced	Total
Entertainment	1,788	511	2,298
Lodging	1,133	500	1,633
Restaurants, etc.	9,057	2,938	11,995
Transportation and Travel	41	37	78
Total	12,019	3,985	16,005

New Braunfels' Hospitality Industry in 2024

Workers' Earnings

The hospitality industry is responsible for more than \$381.8 million in wages to full-time and part-time employees each year. The total earnings for the hospitality industry includes \$226.2 million in direct earnings for workers in the industry and \$155.6 million in indirect or induced workers' earnings.

Total Workers Earnings: \$381,802,681



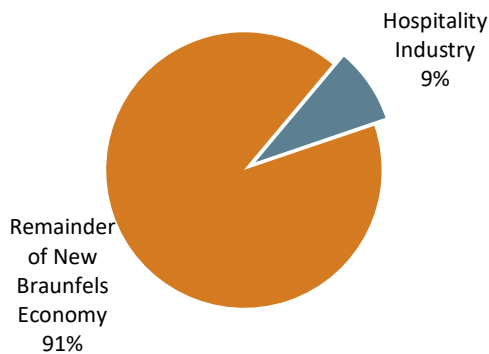
Workers' Earnings by Hospitality Industry Category			
	Direct	Indirect & Induced	Total
Entertainment	\$40,219,655	\$20,526,517	\$60,746,172
Lodging	\$29,798,407	\$22,324,966	\$52,123,373
Restaurants, etc.	\$154,431,475	\$111,165,071	\$265,596,547
Transportation and Travel	\$1,789,304	\$1,547,285	\$3,336,589
Total	\$226,238,841	\$155,563,840	\$381,802,681

Economic Impact in Perspective

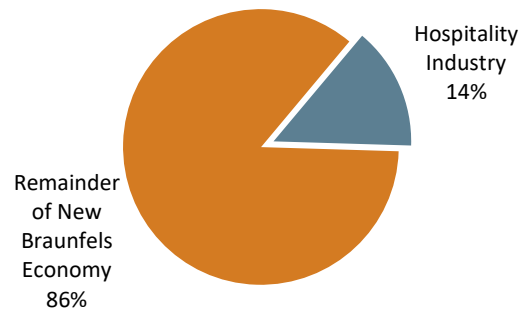
Economic Output, Workers' Earnings and Employment

The hospitality industry contributes significantly to the New Braunfels economy and the graph below illustrates the importance of the industry. The value added supported by the hospitality industry accounts for 8.7% of the estimated gross area product in New Braunfels. Similarly, the industry's direct and indirect workers' earnings account for 14.4% of total earnings in New Braunfels. Hospitality is a labor intensive industry and not surprisingly employs or supports 31.4% of total employment in New Braunfels.

Gross Area Product



Workers' Earnings

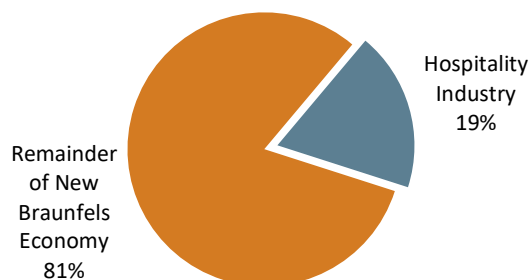


Employment



Retail sales attributable to the hospitality industry account for 18.8% of total retail sales in New Braunfels.

Retail Sales



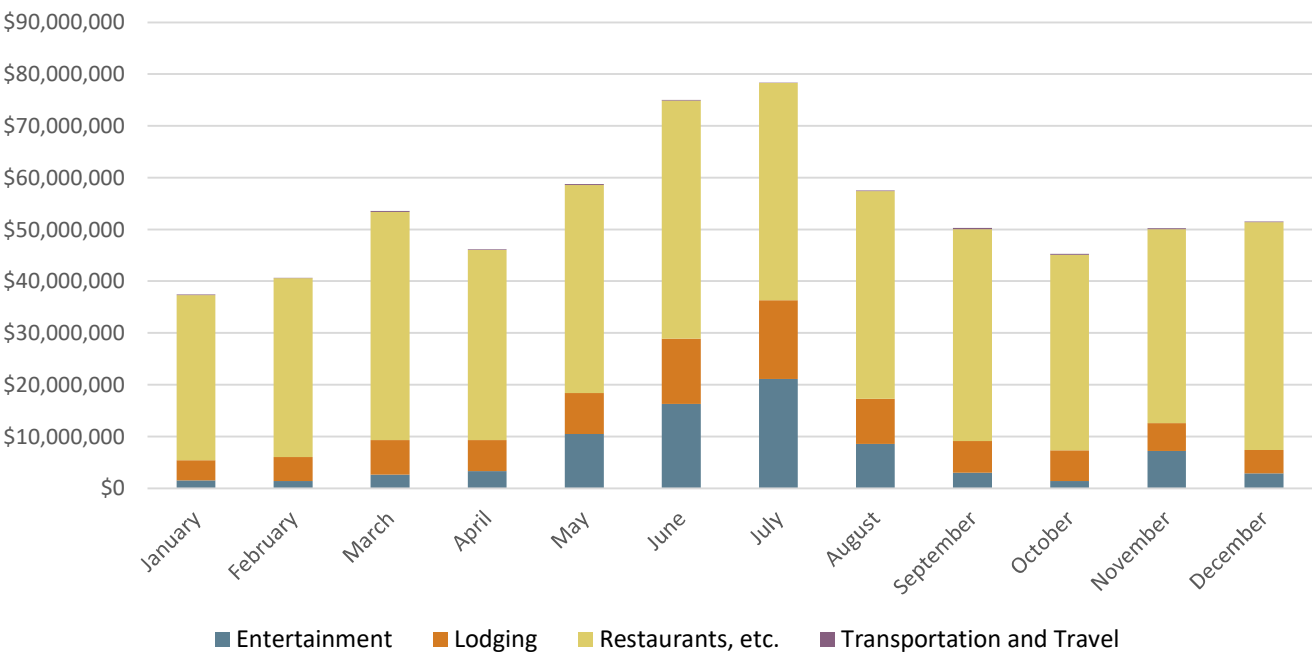
New Braunfels' Hospitality Industry in 2024

Monthly Trends

The Hospitality Industry activity is driven by visitors and, as would be expected, peaks in the summer months. The table below presents gross spending subject to sales tax or hotel occupancy tax for each month in 2024. Here are a few highlights about the monthly breakdown:

- Total industry spending per month ranges from approximately \$37 million in January to over \$78 million in July.
- Both Lodging and Entertainment spending peak in the month of July. Restaurant spending peaks in June but is still quite high in July.
- Restaurant spending makes up about 74% of the total taxable spending shown in the chart.
- Entertainment spending spikes to \$7.2 million in November, likely related to Wursthfest activities. Entertainment spending is much lower in the month before and after Wursthfest.

Monthly Taxable Spending During 2024



New Braunfels' Hospitality Industry in 2024

Fiscal Impact

The economic activity described above in terms of output, earnings and employment translates into significant revenue for the City of New Braunfels and other taxing districts through taxes and fees. Some of the sources of revenue the City of New Braunfels receives from the hospitality industry include sales taxes, property taxes, hotel occupancy taxes, mixed beverage taxes, river use fees, utility fees and other miscellaneous licenses and fees. The hospitality industry contributed \$29.8 million in city revenue during 2024.

Revenue for the City Generated by the Hospitality Industry	
Revenue Category	Total
Sales Taxes	\$8,452,209
General Fund	\$6,339,157
New Braunfels Industrial Development Corporation	\$2,113,052
Property Taxes	\$7,264,915
General Fund	\$3,641,980
Debt Service	\$3,622,935
Hotel Occupancy Taxes	\$4,773,413
Mixed Beverage Taxes	\$938,000
Solid Waste Fund Revenue	\$2,207,263
New Braunfels Utility Franchise Fee	\$1,191,700
Other Miscellaneous Revenue	\$4,964,951
Civic/Convention Center Fund - Rental Fees*	\$610,400
Golf Fund - Fees for Services*	\$2,258,609
River Activities Fund	\$1,182,070
Parks and Recreation*	\$606,722
Permits & Licenses*	\$307,150
Total Revenue	\$29,792,452

** Represents a portion of the total revenue for the fund or category. The hospitality industry's portion was estimated based on line-item analysis or percentage attributable to hospitality or tourism.*

The above city revenue supported by the hospitality industry activity represents 14.7% of the City of New Braunfels' All Funds Revenue.

New Braunfels' Hospitality Industry in 2024

Fiscal Impact

In addition to the taxes and fees generated for the City of New Braunfels, other local taxing districts benefit from the industry through property taxes and sales taxes. The table below illustrates the revenues generated for the city and other taxing districts in the area.

Revenue for Local Taxing Districts Generated by the Hospitality Industry					
	City of New Braunfels	Comal County	Local ISDs	Road District	Total
Sales Taxes	\$8,452,209	\$2,817,403			\$11,269,612
Property Taxes	\$7,264,915	\$4,027,764	\$18,435,526	\$666,482	\$30,394,687
Hotel Occupancy Taxes	\$4,773,413				\$4,773,413
Mixed Beverage Taxes	\$938,000				\$938,000
Other Revenue	\$8,363,915				\$8,363,915
Total	\$29,792,452	\$6,845,167	\$18,435,526	\$666,482	\$55,739,627

New Braunfels' Hospitality Industry in 2024

Hospitality Industry’s Role in Reducing Residents’ Property Tax Burden

In 2024, the hospitality industry generated approximately \$29.8 million in revenue for the City of New Braunfels. To illustrate the fiscal significance of this contribution, the property tax rate increase required to generate an equivalent amount of revenue—absent the hospitality industry—can be estimated as follows:

Based on the City’s most recent budget, the total taxable property value in New Braunfels is \$12.9 billion. To raise \$29.8 million through property taxes alone, the City’s property tax rate would need to increase by approximately \$0.230542 per \$100 of taxable value, resulting in the following:

Tax Rate Increase Required in Absence of Hospitality Industry	
Current City Property Tax Rate (per \$100)	\$0.408928
Required Increase	\$0.230542
New Hypothetical City Tax Rate	\$0.639470

For a residential property with a taxable value of \$300,000:

- Under the current rate, the city tax obligation would be approximately **\$1,227**.
- Under the hypothetical higher rate, the obligation would rise to approximately **\$1,918**.
- This would result in an additional **\$692** per year in city property taxes for the average homeowner.

This comparison highlights the important role the hospitality industry plays in supporting municipal finances and reducing the tax burden that would otherwise fall more heavily on local property owners.

Hospitality Industry 2013 - 2024

Economic Impact Comparison

Impact DataSource prepared similar hospitality industry impact studies for New Braunfels dating back to 2009. This section summarizes key findings from the current analysis alongside selected results from past studies. Since 2020, the hospitality industry has demonstrated a strong and sustained recovery, with economic output, employment, and workers' earnings all increasing significantly. Between 2023 and 2024, each of these indicators continued to rise, albeit at a more moderate pace than the immediate post-pandemic rebound.

To provide context, the table also includes key economic indicators for the overall New Braunfels economy. These figures illustrate how the city has grown over the same time period.

Summary of Direct Hospitality Industry from 2013 to 2024						
Direct Hospitality Industry	2013	2019	2020	2022	2023	2024
Economic Output	\$345,593,369	\$579,544,052	\$452,435,949	\$728,363,616	\$801,954,509	\$821,122,450
Employment	5,662	8,526	6,897	10,932	11,560	12,019
Workers' Earnings	\$99,674,788	\$161,120,117	\$128,504,152	\$203,664,141	\$224,198,542	\$226,238,841
New Braunfels*	2013	2019	2020	2022	2023	2024
Population	62,381	90,209	91,319	104,707	110,958	116,477
Gross Area Product (\$000)	\$3,108,282	\$4,893,130	\$5,108,946	\$6,348,719	\$7,057,956	\$7,750,561
Employment	30,080	43,634	43,342	46,473	49,003	50,907
Workers' Earnings (\$000)	\$1,129,901	\$1,726,629	\$1,742,247	\$2,330,271	\$2,442,396	\$2,654,300

* U.S. Census Estimates, Bureau of Economic Analysis, BLS Local Area Unemployment Statistics, BLS Quarterly Census of Employment and Wages and Impact DataSource estimates.

Hospitality Industry 2013 - 2024

The graph below shows indexed growth in workers' earnings in New Braunfels from 2013 to 2024, with 2013 set as the base year (index = 100). Citywide workers' earnings have steadily increased over this period, with only a slight disruption during the pandemic in 2020. By 2024, citywide earnings had risen by 138%, reaching an index value of 238.

Earnings paid to hospitality industry workers, by contrast, dropped sharply in 2020 — reflecting the significant impact of the pandemic on that sector. However, hospitality wages rebounded quickly from 2021 to 2023. In 2024, earnings in the hospitality sector leveled off slightly but still remained 127% higher than in 2013, with an index value of 227.

Despite the steeper initial decline, earnings for hospitality workers have nearly kept pace with citywide growth over the long term. In fact, hospitality wages have outpaced citywide earnings growth since 2020 — even after factoring in the modest pullback in 2024.



Hospitality Industry 2013 - 2024

Fiscal Impact Comparison

City revenues generated by the hospitality industry from 2013 through 2024 closely track the broader economic trends observed over the same period — with steady growth through 2019, a sharp decline in 2020 due to the pandemic, and a strong rebound beginning in 2021. The rebound in hospitality-related revenues has continued in recent years. From 2022 to 2023, total city revenue from the hospitality industry increased by 9.5%, followed by an additional 3.5% gain in 2024

Revenue for the City Generated by the Hospitality Industry						
Revenue Category	2013	2019	2020	2022	2023	2024
Sales Taxes	\$4,148,800	\$6,739,308	\$6,262,652	\$7,297,381	\$7,573,347	\$8,452,209
Property Taxes	\$2,522,177	\$4,558,370	\$3,687,892	\$5,735,215	\$7,143,339	\$7,264,915
Hotel Occupancy Taxes	\$3,524,005	\$3,996,137	\$2,428,630	\$5,262,037	\$5,139,192	\$4,773,413
Mixed Beverage Taxes	\$274,836	\$649,377	\$448,176	\$825,000	\$922,754	\$938,000
Solid Waste Fund Revenue	\$1,343,775	\$1,716,923	\$1,740,086	\$2,172,228	\$2,236,254	\$2,207,263
NBU Franchise Fee	\$445,483	\$562,503	\$554,538	\$774,212	\$887,799	\$1,191,700
Other Misc. Revenue	\$2,219,750	\$3,699,347	\$2,482,512	\$4,219,831	\$4,881,158	\$4,964,951
Total Revenue	\$14,478,826	\$21,921,964	\$17,604,487	\$26,285,905	\$28,783,843	\$29,792,452

NAICS Codes for the Hospitality Industry

Entertainment	
NAICS Code	Description
51213	Motion picture exhibition
532284	Recreational Goods Rental (Tubes)
7111	Performing arts companies
71121	Spectator sports
7113	Promoters of performing arts
7115	Independent artists, writers and performers
71211	Museums
71213	Zoos and botanical gardens
71219	Nature parks and other similar institutions
71311	Amusement and theme parks
71312	Amusement arcades
71391	Golf courses and country clubs
71399	Other amusement and recreation
81341	Civic and Social Organizations

Lodging	
NAICS Code	Description
7211	Hotels, motels, etc.
7212	RV parks and recreational camps

Restaurants, etc.	
NAICS Code	Description
722511	Full-Service Restaurants
722513	Limited-Service Restaurants
722514	Cafeterias, Grill Buffets, and Buffets
722515	Snack and Nonalcoholic Beverage Bars
7223	Special food services
7224	Drinking places

Transportation and Travel	
NAICS Code	Description
48111	Scheduled air transportation
48521	Interurban and rural bus transportation
48551	Charter buses
48599	Other ground passenger transportation
48711	Scenic and sightseeing transportation
48811	Airport operations
53211	Passenger car rental and leasing
56152	Tour operators
56159	Other travel arrangement services
81293	Parking lots and garages

Methodology

Impact DataSource analyzed a combination of New Braunfels city data and US government data sources to complete this analysis. This section describes the methodology used to calculate the economic impacts this report.

The City of New Braunfels provided a report of 2024 sales tax collections, detailing the 1.5% sales tax allocation to New Braunfels from sales generated in the city. Taxable sales were derived from this data and then summarized by industry. The majority of direct output by the hospitality industry shown in this report was obtained by isolating the NAICS industries included in our definition of the hospitality industry. Taxable sales do not represent total economic output for the area since not all economic output in the hospitality industry is subject to sales tax. Recognizing this fact, specific adjustments were made to this calculation of the hospitality industry's output. For example, hotel accommodations and mixed beverages were not subject to sales taxes but easily quantifiable by analyzing the state reported hotel occupancy taxes and mixed beverage taxes. Although adjustments were added to the taxable sales activity, the economic output of the hospitality industry is still likely a conservative estimate. Direct employment and earnings are based on estimated economic output using NAICS industry-specific ratios calculated from the US Census Bureau's Business and Industry Economic Census. The Economic Census provides sales, employment and earnings by industry and geographical location. Estimates for New Braunfels were based on statewide data for Texas. Economic Census data for New Braunfels, Comal County and San Antonio MSA were either unavailable or did not contain enough data to calculate reliable ratios.

The economic impacts calculated in this report can be categorized into two main types of impacts. First, the direct economic impacts are defined as those that result directly from businesses in the hospitality industry. Indirect jobs and salaries are supported in new or existing area firms, such as maintenance companies and service firms, which may supply goods and services to the industry. In addition, induced jobs and salaries are created in new or existing local businesses, such as retail stores, gas stations, banks, restaurants, and service companies that may supply goods and services to workers and their families.

To estimate the indirect and induced economic impact of the industry on the area, regional economic multipliers were used. Regional economic multipliers are included in the US Department of Commerce's Regional Input-Output Modeling System (RIMS II).

Three types of regional economic multipliers were used in this analysis: output multipliers, earnings multipliers and employment multipliers. Output multipliers were used to estimate the increase in revenue or economic output generated by each of these businesses based on the direct output. Earnings multipliers were used to estimate the amount of salaries to be paid to workers in new indirect and induced jobs. Employment multipliers were used to estimate the number of indirect and induced jobs supported in the area. The multipliers used in the analysis were specific to each firm and industry.

Methodology

Taxable Property Methodology

The taxable value of hospitality industry property and resulting property taxes are based on 2024 Comal County Appraisal data and the number of employees classified as industrial and commercial. The table below illustrates appraised value in Comal County.

<u>2024 Appraised Value by State Code Classification</u>		
Classification	Value	% of Total
A Real Property: Single-family Residential	\$23,277,548,978	61.07%
B Real Property: Multi-family Residential	\$1,699,825,018	4.46%
C Real Property: Vacant Lots and Tracts	\$2,274,834,725	5.97%
D1 Real Property: Qualified Agricultural Land	\$19,977,851	0.05%
D2 Real Property: Non-Qualified Land	\$28,259,576	0.07%
E Real Property: Farm and Ranch Improvements	\$1,303,049,775	3.42%
F1 Real Property: Commercial	\$5,385,658,427	14.13%
F2 Real Property: Industrial	\$704,392,164	1.85%
G Oil, Gas and Other Minerals	\$7,395,730	0.02%
H Tangible Personal Property: Nonbusiness Vehicles	\$0	0.00%
J Real and Personal Property: Utilities	\$335,470,410	0.88%
L1 Personal Property: Commercial	\$1,262,522,878	3.31%
L2 Personal Property: Industrial	\$1,339,813,359	3.52%
M Mobile Homes and Other Tangible Personal Property	\$68,281,600	0.18%
N Intangible Personal Property	\$327,285,155	0.86%
O Real Property: Residential Inventory	\$81,736,320	0.21%
S Special Inventory	\$0	0.00%
X Exempt	\$0	0.00%
Comal County Total Taxable Value	\$38,116,051,966	

Commercial and industrial property was estimated based on a per private employee basis, comparing total Comal County private employment to total taxable values for real and personal property classified for commercial and industrial. The table below summarizes the results of the per employee taxable values.

	Taxable Value	Employment	Taxable Value
F1 Real Property: Commercial	\$5,385,658,427		\$89,924
L1 Personal Property: Commercial	\$1,262,522,878		\$21,080
Total Commercial	\$6,648,181,305	59,891	\$111,005
F2 Real Property: Industrial	\$704,392,164		\$81,020
L2 Personal Property: Industrial	\$1,339,813,359		\$154,108
Total Industrial	\$2,044,205,523	8,694	\$235,128

Industrial employment includes NAICS 31-33 Manufacturing, NAICS 42 Wholesale trade, and NAICS 21 Mining, quarrying, and oil and gas extraction.

Commercial employment includes all other NAICS codes excluding NAICS 11 Agriculture, forestry, fishing and hunting and NAICS 22 Utilities.

The commercial value per employee was applied to the number of employees supported by the hospitality industry in New Braunfels.

The tax rates used in this analysis are discussed below.

Methodology

Tax Rates

Impact DataSource obtained and used the current sales, hotel occupancy and property tax rates.

	Sales Tax Rate	Hotel Occupancy Tax Rate (Per \$100 value)	Property Tax Rate
City of New Braunfels	1.5%	7.0%	0.408928
Comal County	0.5%		0.226715
New Braunfels ISD and other School Districts			1.037700
Lateral Road			0.037515
Total	2.0%	7.0%	1.710858

Some additional information on the RIMS II multipliers used in this analysis is provided next.

Regional Input-Output Modeling System (RIMS II)

The economic impact estimates in this report are based on the Regional Input-Output Modeling System (RIMS II), a widely used regional input-output model developed by the U. S. Department of Commerce, Bureau of Economic Analysis. The RIMS II model is a standard tool used to estimate regional economic impacts. The economic impacts estimated using the RIMS II model are generally recognized as reasonable and plausible assuming the data input into the model is accurate or based on reasonable assumptions. The RIMS II model is described in basic detail below.

Generally speaking, input-output modeling attempts to estimate the changes that occur in all industries based on a change in the demand for the output of an industry. An input-output model allows an analyst to identify the subsequent changes occurring in various industries within a regional economy in order to estimate the total impact on the economy. Total economic impact is the sum of three components: (1) direct, (2) indirect, and (3) induced impacts.

If the demand for the output of an industry, measured by industry sales or revenue, increases by \$1 million, total regional output increases by \$1 million. This initial change in output is called the change in direct economic output and also referred to as the direct expenditure effect. The change in total economic output in the region resulting from the initial change does not stop with the change in direct economic output. Businesses in a variety of industries within the region will be called upon to increase their production to meet the needs of the industry where the initial increase in demand occurs. Further, other suppliers must also increase production to meet the needs of the group of initial supplier firms to the industry. This increase in expenditures by regional suppliers is considered the indirect economic impact of the initial \$1 million in sales, and is classified as indirect expenditures of the total economic impact or the change in indirect economic output.

The total economic impact of the \$1 million in sales includes one more component, the *induced* impact. All economic activity, whether direct or indirect, that results from the initial increase in demand of \$1 million, requires workers, and these workers must be paid for their labor. This means that part of the direct and indirect expenditures is actually in the form of wages and salaries paid to workers in the various affected industries. These wages and salaries will in turn be spent in part on goods and services produced locally in the region. This spending is another part of the regional economic impacts referred to as induced impacts and is classified as induced expenditures or the change in induced economic output.

Based on the initial direct impact, the RIMS II model can be used to estimate the direct, indirect and induced impacts on economic output, value added, earnings and employment in a given region. Economic output is gross output and is the sum of the intermediate inputs and final use. This is a duplicative total in that goods and services will be counted multiple times if they are used in the production of other goods and services. Value added is defined as the value of gross output less intermediate inputs. Workers' earnings or earnings consist of wages and salaries, employer provided benefits and proprietors' income. Employment consists of a count of jobs that include both full-time and part-time workers.

Methodology

The RIMS II model is based on regional multipliers, which are summary measures of economic impacts generated from changes in direct expenditures, earnings, or employment. Multipliers show the overall impact to a regional economy resulting from a change in demand in a particular industry. Multipliers can vary widely by region. Multipliers are higher for regions with a diverse industry mix. Industries that buy most of their materials from outside the state or region tend to have lower multipliers. Multipliers tend to be higher for industries located in larger areas because more of the spending by the industry stays within the area.

The RIMS II model generates six types of multipliers for more than 400 industrial sectors for any region in the United States. The multipliers include four “final-demand” multipliers and two “direct-effect” multipliers. Final demand multipliers indicate the impact of changes in final demand for the output of a particular regional industry on total regional output, earnings, employment and value added. Direct-effect multipliers indicate the impact of changes in regional earnings or employment within a particular industry on total employment or earnings within a region.

Final-demand output multipliers indicate the total regional output (direct, indirect and induced expenditures) that results from an increase in direct expenditures for a good produced by a particular regional industry. For example, if an industry in a particular region is said to have a final demand output multiplier of 2, this tells us that a \$1 increase in final demand for the good produced by that industry results in a \$2 increase in total output or expenditures within the regional economy. Final-demand earnings multipliers indicate the impact of an increase in final demand for the good of a particular regional industry on the total earned income of households within the region. Final-demand employment multipliers indicate the increase in total regional employment that results from a \$1 million increase in final demand for the good produced by a particular regional industry. Final-demand value-added multipliers indicate the increase in total regional value added that results from a \$1 million increase in final demand for the good produced by a particular regional industry. Direct-effect earnings multipliers indicate the impact of a \$1 change in earnings within a particular regional industry on total earnings in all industries within a region. Direct-effect employment multipliers indicate the impact of a change in employment in a particular regional industry on total employment in all industries within a region.

Theoretically, changes in final demand drive the total change in economic output, earnings, and employment. However, these multipliers relationships can be used to estimate impacts in other ways if only limited information is known about a project. For example, the multiplier relationships can be used to estimate the increase in direct economic output based on a given level of employment in a specific industry.

Additional Notes on RIMS II

RIMS II multipliers are based on the average relationships between the inputs and outputs produced in a local economy. The multipliers are a useful tool for studying the potential impacts of changes in economic activity. However, the relative simplicity of input-output multipliers comes at the cost of several limiting assumptions.

- Firms have no supply constraints—Input-output based multipliers assume that industries can increase their demand for inputs and labor as needed to meet additional demand.
- Firms have fixed patterns of purchases—Input-output based multipliers assume that an industry must double its inputs to double its output.
- Firms use local inputs when they are available—The method used by RIMS II to develop regional multipliers assumes that firms will purchase inputs from firms in the region before using imports.

RIMS II, like all input-output models, is a “static equilibrium” model. This means that there is no specific time dimension associated with the results using the model. For the RIMS II model, it is customary to assume that the impacts occur in one year because the model is based on annual data.

About Impact DataSource

Impact DataSource is an Austin economic consulting, research, and analysis firm founded in 1993. The firm has conducted over 2,500 economic impact analyses of firms, projects, and activities in most industry groups in Texas and more than 39 other states.

In addition, Impact DataSource has prepared and customized more than 150 economic impact models for its clients to perform their own analyses of economic development projects. These clients include the City of New Braunfels, Schertz EDC, and Greater

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San Marcos Partnership among others.

The firm's principal, Paul Scheuren, performed this economic impact analysis. Paul has a Master of Arts in economics from Clemson University as well as a Bachelor of Business Administration in actuarial science from Temple University.