

# Boulder Convention and Visitors Bureau 2015 Economic Impact of Tourism



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## **2015 ECONOMIC IMPACT OF TOURISM**

### *Final Results*

#### **INTRODUCTION**

This report summarizes the estimated economic impact of tourism in the City of Boulder in 2015. The results are primarily based on a year-long visitor study conducted by RRC Associates and on the IMPLAN economic impact modeling system, a software and data package widely used for assessing the economic impacts of a variety of industries, including tourism.

#### **Methodology**

This report presents estimates of the economic impacts of tourism in the City of Boulder for 2015. The information used to calculate the economic impact is primarily derived from two sources: the 2015/16 Boulder CVB Visitor Study, and 2015 IMPLAN data for zip codes encompassing the City of Boulder. Additionally, the analysis has been informed by a variety of other tourism research sources and governmental revenue sources, as discussed later in this section.

The study estimates the following types of economic impacts resulting from tourism in the City of Boulder:

- Volume of visitation (as measured in visitor-days)
- Direct visitor expenditures
- Direct and “secondary” (indirect and induced; aka “multiplier”) economic output
- Direct and “secondary” employment
- Direct and “secondary” labor income

#### **Visitor Study**

The 2015/16 Boulder CVB Visitor Study provided a detailed analysis of visitors to Boulder, including their demographics, geographic origin, length of stay, reason for visit, activities and

events participated in during the trip, and expenditure amounts. This last piece of information – direct visitor expenditures – is one of the critical primary inputs to the Economic Impact study.

The visitor research program for the Boulder CVB utilized a hybrid approach to data collection, which included two different methodologies:

- 1) Stationary survey kiosks placed at various locations,
  - Survey kiosks were placed at various times of the year in the Holiday Inn Express, Celestial Seasoning tasting room, Downtown Boulder Visitor Center, Best Western Plus, Chautauqua Ranger Cottage, and Homewood Suites.
- 2) Short interviewer intercept surveys administered in selected places around Boulder, with an online follow-up survey,
  - Intercept surveys were completed in and around Chautauqua and the nearby trailheads, the Downtown Pearl Street Mall area, two CU football games, two CU men's basketball games, The Boulder International Film Festival (BIFF), the Conference on World Affairs (CWA), and other locations in the city. Respondents to the short intercept survey were also sent a text or email link to a follow-up online survey to be completed at a later time.

As of May 1, 2016, the total (weighted) sample size for the Visitor Study included 1,160 intercept and follow-up surveys. The sample size, from a purely statistical calculation, provides a 95 percent confidence level of  $\pm 2.9$  percent about any given percentage expressed in the overall results. In other words, for a results that shows 50 percent of visitors participated in a particular activity, the true percentage is somewhere between 47 and 53 percent.

The primary inputs from the 2015/16 Boulder CVB Visitor Study used in this Economic Impact Study were the visitor mix and aggregate level of expenditures in Boulder per person per trip. It is important to note that the visitor expenditure results are from a primary survey research effort, and not from a secondary source. Therefore, the visitor expenditure figures are largely accurate, representative, and specific to Boulder.

### **IMPLAN**

Using input-output analysis in combination with regional specific Social Accounting Matrices and Multiplier Models, IMPLAN provides a highly accurate and adaptable model for its users. The IMPLAN database contains county, state, zip code, and federal economic statistics which are specialized by region, not estimated from national averages and can be used to measure the effect on a regional or local economy of a given change or event in the economy's activity.<sup>1</sup>

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<sup>1</sup> IMPLAN website, [www.implan.com](http://www.implan.com)

For purposes of this analysis, an IMPLAN economic impact model was developed based on the geographic area encompassing zip codes to which the US Postal Service has assigned the location name “Boulder.”

### **Other Sources**

As noted previously, a variety of other data sources have been used to inform the analysis, as outlined below:

- “Colorado Travel Impacts 1996 – 2014” by Dean Runyan Associates was utilized to inform estimates of visitor expenditures by industry sector and visitor group, particularly in reference to that study’s estimates of the economic impacts of overnight travelers to Boulder County in 2014.
- “Colorado Travel Year 2014” by Longwoods International was utilized to inform estimates of visitor volumes, visitor types (day or overnight) and visitor expenditures by visitor group.
- The summer 2014 Downtown Boulder User Survey (conducted by RRC Associates) was used to provide estimates of the proportion of visitor expenditures by industry sector (e.g. lodging, restaurants, retail, etc.) and visitor group (overnight in commercial lodging, overnight with friends/relatives, etc.).
- A variety of other data was referenced as well, including:
  - City of Boulder accommodations and sales tax collections by sector, as reported by the City of Boulder.
  - State taxable sales for the City of Boulder and Boulder County, as reported by the Colorado Department of Revenue.
  - A variety of hotel lodging metrics, as reported by STR for the City of Boulder and Boulder County (room inventories, lodging occupancy rates, average daily rates, etc.).

## EXECUTIVE SUMMARY

Using information from the 2015/16 Boulder Visitor Study, hotel lodging statistics from STR, and IMPLAN multipliers for the City of Boulder, this report estimates that the ***total economic impact of tourism for the City of Boulder in 2015 to be \$515.4 million***, including direct economic impact in the City of Boulder of \$346.3 million and secondary impacts (indirect and induced) of \$169.1 million.

The estimated ***number of jobs in the City of Boulder attributable to tourism is 7,105***, including 5,731 jobs directly tied to the tourism industry.

The ***total labor income attributable to tourism in the City of Boulder is \$185.3 million***.

The estimated amount of tax (sales, lodging, food service, and admissions) that visitors contribute to the City of Boulder is \$15.2 million, or approximately \$363 per household in the City.

Table 1 below summarizes selected key findings from the research.

**Table 1**  
**Summary of Selected Key Findings**

<b>Economic Measure</b>	<b>Amount</b>
Direct economic impact*	\$346,298,841
Secondary economic impact (indirect and induced effects)	<u>\$169,080,591</u>
<b>Total economic impact (Direct economic impact plus secondary impact)</b>	<b>\$515,379,432</b>
<b>Total Jobs</b>	<b>7,105</b>
<b>Total Labor Income</b>	<b>\$185,299,228</b>
<b>City of Boulder tax generated by tourism</b>	<b>\$15,152,605</b>

\* Excluding airfare and expenditures outside of the City of Boulder.

## REPORT FINDINGS

### Visitor Study Findings

This section presents the information from the 2015/16 Visitor Study that is most relevant to the Economic Impact study.

- Visitor Type. Information from the 2015/16 Visitor Study was used to create a customized visitor type distribution, as presented in Table 2 below. As shown, day visitors were the largest segment, at 43 percent of visitor-days in 2015, while overnight visitors staying in commercial lodging in the City of Boulder (hotel, motel, B&B, etc.) accounted for approximately 28 percent. Those staying overnight with family or friends were the third major segment of visitors (23 percent of visitor nights). The small remainder was made up of overnight visitors in other accommodations (Airbnb, RV, dorm room, etc.) at 5.5 percent.

**Table 2**  
**2015 Visitor Type**

<b>Visitor Type</b>	<b>Percent of Visitor-Days (Nights)</b>
Overnight Visitor in Boulder commercial lodging	28.2%
Overnight Visitor staying with family/friends	22.9%
Other Overnight Visitor (Airbnb, RV, dorm room, etc.)	5.5%
<u>Day Visitor</u>	<u>43.4%</u>
<b>Total</b>	<b>100.0%</b>

Source: Boulder CVB 2015/16 Visitor Study

- Per Person Daily Expenditures. Information from the 2015/16 Visitor Study also provided information on per person daily expenditures while in the City of Boulder, as shown below in Table 3. Overnight visitors staying in commercial lodging (\$230) spend more than overnight visitors staying in other lodging (\$124), though the latter segment is a much smaller group. Additionally, overnights staying with family/friends spend \$131 per person per day on average, while day visitors spend somewhat less (\$61). Although overnight visitors spend over twice as much as day visitors, on average, it is worth noting that day visitors tend to be repeat visitors who regularly contribute to the Boulder economy.

**Table 3**  
**Average Daily Expenditures per Person, by Visitor Type**

Visitor Type	Average Daily Expenditures per Person
Overnight Visitor staying in commercial lodging	\$230
Overnight Visitor staying with family/friends	\$131
Other Overnight Visitor (Airbnb, RV, dorm room, etc.)	\$124
<u>Day Visitor</u>	<u>\$61</u>
<b>Overall (weighted by segment size)</b>	<b>\$128</b>

Source: Boulder CVB 215/16 Visitor Study

## Hotel Statistics

Hotel statistics are provided by Smith Travel Research (STR). In 2015, the supply of available hotel rooms in the City of Boulder only (not including hotels in unincorporated areas close to the City) was 684,015 available rooms (**over 90,000 fewer available rooms than in 2013**). The average occupancy rate in Boulder in 2015 was 73.5 percent, meaning that 502,751 hotel rooms were occupied in Boulder in 2015.

Given an average of 1.85 persons per occupied room (calculated based on the actual per person spent on hotels divided by the average room rate), the total number of visitor-nights in hotels and other commercial lodging in the City of Boulder only (B&Bs, Inns, etc.) 930,089.

From the Visitors Survey, it is known that the average length of stay is 3.2 nights. Dividing 930,089 hotel room-nights by 3.2 nights per stay results in a total of 288,937 unique individuals staying in Boulder hotels in 2015. Additionally, the average room rate (ADR) in Boulder in 2015 was \$171.23. The average revenue per available room (REVPAR) was \$125.90. (The information in this paragraph is not specifically used to calculate the economic impact below, but is provided for general informational purposes and to provide context.)



## Number of Visitor-Days (Nights) in Boulder in 2015

Combining the information from the Visitor Study with hotel operating statistics results in estimates of the visitor-days in Boulder in 2015. (A visitor-day (night) is one person staying one day in Boulder for day visitors, and one visitor staying one night in Boulder for overnight visitors. A party of three people staying two nights would be six visitor days. Day visitors are counted once per person in the visitor-day calculation.)

Overnight visitors staying in commercial lodging accounted for approximately 28 percent of Boulder's total visitor-nights in 2015 (from the Visitors Study), or a total of 930,089 visitor-days. Thus, the remaining visitor segments, as profiled in Table 4 below, are overnight with family/friends (22.9 percent of the total, or 756,398 visitor-days), other overnight (5.5 percent of the total, or 181,162 visitor-days), and day visitors (43.4 percent of the total, or 1,432,085 visitor-days).

Total visitor-days in Boulder in 2015 amounted to 3.3 million.

The **total direct spending by visitors in the City of Boulder in 2015 was \$422.8 million.**

**Table 4**  
**Total Direct Visitors Spending in City of Boulder, 2015**

Visitor Type	Number of visitor-days (nights)	Per person daily spend	Total Visitor Expenditures
Overnight Visitor staying in commercial lodging	930,089	\$230	\$213,920,561
Overnight Visitor staying with family/friends	756,398	\$131	\$99,088,138
Other Overnight Visitor (camping, dorm room, etc.)	181,162	\$124	\$22,464,087
<u>Day Visitor</u>	<u>1,432,085</u>	<u>\$61</u>	<u>\$87,357,155</u>
<b>Overall</b>	<b>3,299,734</b>	<b>\$128</b>	<b>\$422,829,942</b>

Sources: Boulder CVB 2015/16 Visitor Study, CHLA

## Expenditures, Direct Economic Impact and Total Economic Impact

### Terminology

In order to evaluate the economic scope and impacts of tourism annually in Boulder, several economic measures have been calculated: “Direct Economic Impact,” “Secondary Economic Impact,” and “Total Economic Impact.”

- “Direct Visitor Expenditures” shows the estimated dollar amounts spent by all visitors to Boulder, as collected on visitor surveys and discussed above.
- “Direct Economic Impact” is a measure of economic activity associated with only visitors to the City of Boulder. Economic activities associated with tourism from those who reside within Boulder County are excluded, since it is assumed that they would have spent their discretionary/entertainment dollars on other goods/services/activities in the local area anyway. “Economic impact” is thus a slightly narrower measure than “economic significance,” and it tabulates the incremental “new money” brought into the City of Boulder by outside visitors attracted to the area as a result of tourism.

Again, the term “direct” further specifies that the economic impact evaluation has been limited to first-order economic effects. Secondary/multiplier impacts are included later in this analysis and are in addition to the direct effects.

Note as well that the direct economic significance/impact measures described above differ from raw expenditures, insofar as the economic significance/impact measures both incorporate an adjustment to retail purchases to include retailer margins only, and thus more accurately reflect local economic activity. This methodological step is described in more detail in the “detailed calculations” section to follow.

- “Secondary Economic Impact” represents the additional economic activity stimulated in the local economy as a result of the direct impacts, and is sometimes referred to as the “multiplier effect.” This includes “indirect” effects associated with the supply chain (e.g. the linen provider which services a hotel) and “induced” effects associated with employees in directly or indirectly affected industries spending their wages in the local economy; plus related follow-on rounds of economic activity from these indirect and induced effects. This analysis uses output multipliers calculated by the Minnesota IMPLAN Group for applicable industry sectors for the City of Boulder as of 2015, to estimate secondary economic impacts.

- “Total Economic Impact” represents the sum of direct and secondary economic impacts.

## Summary of Results

The *total economic impact of tourism in the City of Boulder in 2015 is estimated to have been \$515.4 million*. This number accounts for the direct and secondary impacts associated with non-resident visitors and their immediate travel parties. Selected key findings are presented in the table below.

**Table 5**  
**Total Spending in Boulder**

<b>Total Economic Impact of Tourism</b>	<b>Direct Visitor Expenditure</b>	<b>Direct Economic Impact</b>	<b>Secondary Impact (Indirect and Induced)</b>	<b>Total Economic Impact</b>
Accommodations	\$86,945,927	\$86,945,928	\$37,067,967	\$124,013,895
Food Service	\$118,489,697	\$118,489,697	\$50,780,610	\$169,270,307
Food Stores	\$33,572,081	\$9,299,466	\$3,903,627	\$13,203,093
Local transportation & gas	\$40,483,980	\$31,537,020	\$16,834,337	\$48,371,357
Arts, Entertainment, Recreation	\$68,131,576	\$68,131,576	\$44,759,943	\$112,891,519
<u>Retail sales</u>	<u>\$75,206,683</u>	<u>\$31,895,154</u>	<u>\$15,734,107</u>	<u>\$47,629,261</u>
<b>Total Economic Impact of Tourism</b>	<b>\$422,829,942</b>	<b>\$346,298,841</b>	<b>\$169,080,591</b>	<b>\$515,379,432</b>

It is important to note that the \$86.95 million in spending by overnight visitors in commercial lodging in 2015 is nearly identical to the gross lodging sales in the City of Boulder in 2015 (\$6.385 million in accommodations tax collected divided by the 7.5% tax rate results in \$85.1 million in actual lodging sales). The projection is slightly higher for some potential lodging sales that are not taxed and/or reported. The relative agreement of these two numbers is an important check on the accuracy of the overall direct spending and total economic impact figures.

### **Detailed Calculations**

The worksheets that follow present a detailed outline of the methodology employed in developing the estimates for direct economic impact and significance and total economic impact and significance.

The total per person daily visitor expenditure figure was broken into spending categories using a proportionate allocation based on research from Dean Runyan's 1996-2014 study of Colorado Travel Impacts. The share of visitor spending in Boulder County documented in that report was used to allocate the daily per person spending from the Visitors Study. The results of the spending allocation into the various categories can be seen in Table 6 below.

Other considerations in the calculations include the following:

- Identify Boulder County residents and non-residents by the zip code provided in the survey. Residents are excluded from the economic impact totals.
- Use visitor nights by visitor type as presented in Table 4 above.
- Use the per capita per day expenditure figures noted above in Table 3 to create spending estimates for visitors.
- Adjust retail sales to reflect local capture of economic value. Much of the price of retail items reflects manufacturers' costs of creating goods (cost of goods sold), as well as the costs charged by transporters and wholesalers. Insofar as such manufacturers, transporters and wholesalers are located outside of the Boulder County region, it is important to exclude those portions of economic value creation from the local economic evaluation, and only include that proportion of economic value represented by the retailer's margin. This step is applied in this analysis to grocery purchases, shopping purchases, transportation/gas expenditures, and other expenditures. Based on data reported for the City of Boulder in 2015 by the IMPLAN economic modeling system, a grocery retail margin of 27.7 percent, a blended retail margin of 42.4 percent, and a local transportation/gas margin of 77.9 percent have been applied to expenditures in these categories. These adjustments are presented in Table 7 below. These adjustments are applied to the raw retail expenditure figures to derive direct economic impacts and direct economic significance associated with retail purchases.
- Calculate the secondary economic effects of spending in various industry categories using multipliers from the IMPLAN economic modeling system for City of Boulder in 2015. The shopping multiplier is calculated as the average of multipliers for the

following retail industry categories: clothing, sporting goods, general merchandise, and miscellaneous retail.

**Table 6**  
**Aggregate Direct Visitor Spending**

Visitor Type	Overnight in Commercial Lodging	Overnight with Family/Friends	Overnight in Other Accommodations	Day Visitor	Total
<b>Total Visitor-Nights in City of Boulder</b>	930,089	756,398	181,162	1,432,085	3,299,734
<b>Per Person per Night Expenditures</b>					
Accommodations	\$91.53	\$0.00	\$10.00	\$0.00	
Food Service	\$48.58	\$45.96	\$43.51	\$21.40	
Food Stores	\$13.77	\$13.02	\$12.33	\$6.06	
Local transportation & gas	\$16.60	\$15.70	\$14.87	\$7.31	
Arts, Entertainment, Recreation	\$27.94	\$26.43	\$25.02	\$12.31	
Retail sales	\$31.58	\$29.88	\$18.28	\$13.91	
<b>Total expenditures per Visitor Night</b>	<b>\$230.00</b>	<b>\$131.00</b>	<b>\$124.00</b>	<b>\$61.00</b>	
<b>Total Direct Visitor Expenditures</b>					
Accommodations	\$85,134,307	\$0	\$1,811,620	\$0	\$86,945,927
Food Service	\$45,188,159	\$34,767,768	\$7,882,136	\$30,651,633	\$118,489,697
Food Stores	\$12,803,312	\$9,850,868	\$2,233,272	\$8,684,629	\$33,572,081
Local transportation & gas	\$15,439,288	\$11,878,987	\$2,693,063	\$10,472,641	\$40,483,980
Arts, Entertainment, Recreation	\$25,983,192	\$19,991,467	\$4,532,228	\$17,624,689	\$68,131,576
Retail sales	\$29,372,304	\$22,599,049	\$3,311,768	\$19,923,562	\$75,206,683
<b>Total Direct Visitor Expenditures</b>	<b>\$213,920,561</b>	<b>\$99,088,138</b>	<b>\$22,464,087</b>	<b>\$87,357,155</b>	<b>\$422,829,942</b>

Source: 2015/16 Visitors Study

**Direct Economic Impact**

**Table 7**  
**Direct Economic Impact**

	<b>Direct Visitor Expenditures</b>	<b>Adjustment for Retailer Margins</b>	<b>Direct Economic Impact</b>
Accommodations	\$86,945,927	n/a	\$86,945,928
Food Service	\$118,489,697	n/a	\$118,489,697
Food Stores	\$33,572,081	27.7%	\$9,299,466
Local transportation & gas	\$40,483,980	77.9%	\$31,537,020
Arts, Entertainment, Recreation	\$68,131,576	n/a	\$68,131,576
Retail sales	\$75,206,683	42.4%	\$31,895,154
<b>Totals</b>	<b>\$422,829,942</b>		<b>\$346,298,841</b>

Source: 2015/16 Visitors Study, IMPLAN 2015 City of Boulder

**Multipliers**

**Table 8**  
**Economic Impact Multipliers**

<b>Economic Impact Multipliers</b>	<b>Direct Effect</b>	<b>Indirect Effect</b>	<b>Induced Effect</b>
Accommodations	1.00	0.266	0.160
Food Service	1.00	0.221	0.208
Food Stores	1.00	0.199	0.221
Local transportation & gas	1.00	0.306	0.227
Arts, Entertainment, Recreation	1.00	0.471	0.186
Retail sales	1.00	0.263	0.230

Source: IMPLAN 2015 City of Boulder

## Employment Impact

An important output of the IMPLAN database is estimated multipliers of the number of jobs created as a result of the industry in question (in this case, tourism). The jobs calculation includes people directly employed by tourism-related businesses (such as the desk clerk and housekeeper in a hotel) as well as people working in businesses that have an indirect connection to tourism (retail stores, restaurants, food stores, gas stations, and many other jobs). The proportion of the job that is related to tourism is estimated by the IMPLAN employment multipliers for the City of Boulder.

The estimated ***number of jobs in the City of Boulder attributable to tourism is 7,105***, including 5,731 jobs directly tied to the tourism industry.

**Table 9**  
***Jobs Impact of Tourism, City of Boulder***

<b>Jobs Impact</b>	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
Accommodations	945	171	107	1,222
Food Service	2,212	164	189	2,565
Food Stores	130	12	16	158
Local transportation & gas	382	70	55	506
Arts, Entertainment, Recreation	1,442	381	98	1,921
<u>Retail sales</u>	<u>621</u>	<u>55</u>	<u>57</u>	<u>733</u>
<b>Total Jobs</b>	<b>5,731</b>	<b>852</b>	<b>522</b>	<b>7,105</b>

Source: 2015/16 Visitors Study, IMPLAN 2015 City of Boulder

## Labor Income Impact

Another output of the IMPLAN database is labor income impact, or the payroll and wages paid to employees as a result of tourism in the City of Boulder. These labor income dollars include wages paid to individuals employed in tourism related business, and indirect and induced businesses as well.

The ***total labor income attributable to tourism in the City of Boulder is \$185.3 million.***

**Table 10**  
**Labor Income Impact of Tourism, City of Boulder**

<b>Labor income impact</b>	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
Accommodations	\$26,694,586	\$7,755,760	\$4,514,940	\$38,965,286
Food Service	\$53,063,498	\$7,644,720	\$7,970,403	\$68,678,621
Food Stores	\$4,580,056	\$493,081	\$665,220	\$5,738,357
Local transportation & gas	\$13,384,736	\$3,651,654	\$2,322,437	\$19,358,827
Arts, Entertainment, Recreation	\$19,112,942	\$9,647,261	\$4,109,792	\$32,869,995
<u>Retail sales</u>	<u>\$14,946,443</u>	<u>\$2,365,567</u>	<u>\$2,376,132</u>	<u>\$19,688,142</u>
<b>Total labor income</b>	<b>\$131,782,261</b>	<b>\$31,558,043</b>	<b>\$21,958,924</b>	<b>\$185,299,228</b>

Source: 2015/16 Visitors Study, IMPLAN 2015 City of Boulder



## SALES TAX COLLECTIONS ATTRIBUTABLE TO VISITORS

Tourism in Boulder generates sales tax – from retail purchases, lodging, restaurants, and admissions taxes. The estimated amount of tax (sales, lodging, food service, and admissions) that visitors contribute to the City of Boulder is \$15.2 million, as presented in Table 11 below.

The tax revenue from tourism in the City of Boulder generated approximately \$363 per household in the City (41,687 households per US Census).

**Table 11**  
**City of Boulder Sales Tax Generated by Tourism**

	Direct Visitor Expenditures	Estimated share of expenditures that are taxable	City of Boulder Tax Rates	City of Boulder Sales Tax Generated
Accommodations	\$86,945,927	100.0%	7.50%	\$6,385,073
Food Service	\$118,489,697	90.3%	4.01%	\$4,288,172
Food Stores	\$33,572,081	100.0%	3.86%	\$1,295,882
Local transportation & gas	\$40,483,980	12.5%	3.86%	\$195,335
Arts, Entertainment, Recreation	\$68,131,576	2.5%	5.00%	\$85,164
Retail sales	\$75,206,683	100.0%	3.86%	\$2,902,978
<b>Totals</b>	<b>\$422,829,942</b>			<b>\$15,152,605</b>

Source: 2015/16 Visitors Study, IMPLAN 2015 City of Boulder

## CONCLUSION

Tourism is an important industry in the City of Boulder, with a significant economic impact in terms of direct visitor spending, secondary impacts, and employment impacts. The overall health of the industry should be a priority of those involved in decisions and policy related to tourism in the City of Boulder.