

MEMORANDUM

To: Rick Holman, Town Manager, Town of Breckenridge

From: Andrew Knudtsen, Brian Duffany, and Rachel Shindman,
Economic & Planning Systems

Subject: Accommodation Unit License Fee Analysis; EPS #213105

Date: November 4, 2021

The Economics of Land Use



This technical memorandum summarizes the study supporting a regulatory fee program to be applied to short term accommodation unit (short term rental or "STR") licensees in the Town of Breckenridge. Economic & Planning Systems (EPS) was retained by the Town of Breckenridge to determine a reasonable fee for this program. The analysis demonstrates a reasonable relationship between guest spending from STRs in the town and the demand for housing affordable at incomes of 150 percent of Area Median Income (AMI) or less. The study uses economic impact techniques to quantify the relationships between guest spending when staying in STRs and the number of jobs and employee-households supported in the local economy by that spending.

Guests staying in STRs spend money in the local economy, mainly in the retail, food and beverage, and recreation industries which supports jobs that do not pay enough for employees to afford market rate housing in the town. The basis of the fee is therefore the gap between what the employee-households can afford and the cost to purchase a home in the Town of Breckenridge.

The fee also accounts for the possibility that a home used as an STR could be occupied by a local resident, and the fee is further based on the difference between the impact of guest spending in the local economy and the baseline impact of local resident spending.

Rationale

This regulatory fee is needed to support the local labor force and Town housing programs that sustain the tourism economy in Breckenridge. Without an adequate supply of housing and housing support programs, the Town risks losing some of its labor supply that is essential to the businesses in which STR guests spend money during their stay. Tourism is the Town's economic base.

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If businesses do not have an adequate labor force and if workers do not have adequate housing, the guest experience and the Town’s economy are likely to degrade.

In addition, the 2019 Summit County Housing Needs Assessment documented through a resident and employee survey that STRs are affecting housing opportunities for local residents. Overall, 14.5 percent of survey respondents countywide and 13.9 percent in the Upper Blue Basin (Breckenridge and vicinity) had a lease terminated because the owner was converting the home to a short term rental, as shown in **Table 1**. While the regulatory fee is based on the jobs and housing relationships to guest spending, the impacts of STRs on the housing supply provides additional rationale for the need and public purpose of this fee.

Table 1. Survey Responses on STR Effects on Housing Supply

Description	Percent Yes
Have you had a landlord break or not renew a lease in order to convert their long term rental into a short term rental in Summit County?	
Lower Blue Basin	13.0%
Snake River Basin	16.0%
Ten Mile Basin	15.9%
Upper Blue Basin	<u>13.9%</u>
Summit County Total	14.5%

Source: Economic & Planning Systems

STR owners or hosts will pay an annual licensing fee under this program. The benefits that the fee payers are likely to receive will be investment in housing by the Town to house the workforce needed to sustain the visitor economy. STR owners and operators are likely to benefit from the supply of labor and from investments the Town will make using the fee revenue on housing for the local workforce. Having more housing options for the local workforce is also likely to benefit the fee payers in better customer service through increased employee retention and reduced employee turnover.

Methodology

This analysis uses a jobs-housing economic impact model to quantify the jobs and households supported by guest spending in STRs. The analysis begins by quantifying the jobs supported by spending. Next, several analytical steps are taken to translate the supported jobs to employees and employee-households, where a household is a group of people (related or unrelated) living in one occupied dwelling unit.

The IMPLAN model (Impact Analysis for Planning) was used to estimate the relationships between spending and jobs supported. IMPLAN was developed by the Bureau of Land Management, U.S. Forest Service, and the University of Minnesota and is widely used by state and federal agencies, academic researchers, and local economic development organizations to evaluate the economic impacts of proposed policies, new industries, and land use changes.

The conversion of jobs (from IMPLAN) to employee households uses analytical techniques commonly used in housing economics and affordable housing studies as discussed further in the body of this memorandum.

Data Sources

Analysis inputs come from the following sources:

- Accommodation inventory: Town of Breckenridge (number of units, number of bedrooms, average number of bedrooms per unit)
- STR occupancy rates: Inntopia and Breckenridge Tourism Office
- Guest spending: Breckenridge Lodging Guest Survey, Winter and Summer 2016-2021 (RRC Associates)
- Home prices: Multiple Listing Service (MLS)
- Wages by Occupation: Bureau of Labor Statistics (BLS)
- Median household income: US Census (ACS 5-year estimates, Town of Breckenridge)
- Jobs per employee, employees per household: Summit County Housing Needs Assessment Update (resident survey, 2019)

Guest Spending Analysis

- **Guest spending** – The first step in this analysis is determining the spending of guests in Breckenridge. Data from the Breckenridge Lodging Guest Surveys, averaged over 2016 to 2021 and weighted by season, shows that on average a visitor to Breckenridge spends \$162.51 per day. This includes \$77.40 on food and beverage, \$51.47 on retail and shopping, and \$33.64 on entertainment and recreational activities. This spending was converted into per-unit expenditures (based on average guests per unit from the same survey) for an average guest spending level of \$585 per unit per day.
- **Jobs supported by industry** – The spending associated with guests is applied to the IMPLAN model as an “industry output” event for the three affected industries (NAICS 72 – Accommodation and Food Services, NAICS 44-45 – Retail Trade, and NAICS 71 – Arts, Entertainment, and Recreation). IMPLAN applies industry expenditure flows through its input-output model and estimates the spending and jobs supported in the 20 major industries in the North American Industrial Classification System (NAICS).
- **Jobs to employees (multiple job holder adjustment)** – An adjustment is made to acknowledge that many employees have more than one job, such as two part time jobs or a full time and a part time job. So as not to overestimate the number of *employees* supported, the number of jobs is reduced using a factor of 1.71 jobs per employee. This factor is specific to the Upper Blue Basin, as reported in the resident survey conducted as part of the 2019 County Housing Needs Assessment Update.

- **Employees by industry to occupations and wages** – A NAICS industry contains a wide range of job types and wage ranges. For example, a worker in the retail NAICS sector could be an accountant (for the retailer) or retail showroom employee. The range of wages and occupations supported is better represented by the 21 Standard Occupational Classifications defined by the Bureau of Labor Statistics (BLS). The National Industry by Occupation Matrix published by the BLS provides the estimated distribution of occupations and wages for each NAICS category. The results from the IMPLAN analysis are applied to the Industry by Occupation Matrix to estimate the number of jobs by wage level supported.
- **Household formation** – A final adjustment is made to account for the fact that many households have more than one earner. This adjustment has the effect of raising the collective income of the employees within a household, thus increasing the amount the employee-household can pay for housing and reducing the gap between their ability to pay and the cost of housing. In the Upper Blue Basin, there are an average of 1.90 earners per household (2019 Housing Needs Assessment). In this analysis, the first earner earns the wage derived from the economic impact analysis and allocation to occupations. The “second” 0.90 earner is assumed to earn 0.90 multiplied by average wage in the industry of the primary earner.
- **Tabulation of households by income range** – The last step involves counting the number of households supported by income range, expressed as a percentage of Area Median Income (AMI). Given the breadth of need addressed by housing programs and policies in the Town of Breckenridge, for this analysis all households earning up to 150 percent of AMI are included. The AMI definitions are based on the Colorado Housing and Finance Authority (CHFA) 2020 income limits for Summit County.

Local Resident Household Analysis

The last component of the analysis involves isolating the difference between guest spending and local resident household spending. To do this, these same steps outlined above are undertaken for a resident household earning the local median income of \$89,403 (as reported in the US Census ACS 2019 data for Breckenridge) to document the jobs supported from household spending in the economy.

This household income is input to the IMPLAN model, which applies an expenditure profile (including savings) specific to the household income range. The model then estimates the spending and jobs supported in the 20 major NAICS industries. The same steps to determine need by AMI range are completed, and this housing need is then subtracted from that of guest spending, resulting in the needs associated with guest spending above those of a local resident household.

Analysis

Guest Spending

Guest spending was modeled on the average expenditure across all accommodation types, weighted by season (winter and summer) to determine an overall average. Data inputs on spending come from the Breckenridge Lodging Guest Survey averaged over 2016 to 2021 time period (RRC Associates). Per person expenditures were converted to per unit figures at 3.6 people per party or unit on average. Within the IMPLAN model 1,000 accommodation units were modeled in order to establish an appropriate scale of analysis. Per unit and per bedroom adjustments are made later in the model to calibrate the fee.

As shown in **Table 2**, with an average daily spending rate of \$585 per unit per day, 1,000 units results in total annual spending of \$213.5 million. Note that at this point in the analysis 100 percent occupancy (365 days of spending) is used. The average annual occupancy rate adjustment is applied in a later analysis step.

Table 2. Guest Spending

Description	Factor	Guest Spending - All
Program		
Units		1,000
Guest Spending (per unit per day)		
Food & beverage		\$279
Retail/shopping		\$185
Entertainment/recreational activities		\$121
Total		\$585
Annual Guest Spending (per unit per year)		
Food & beverage	365 days (100% occ.)	\$101,709
Retail/shopping	365 days (100% occ.)	\$67,630
Entertainment/recreational activities	365 days (100% occ.)	\$44,204
Total		\$213,543
Total Guest Spending		
Food & beverage	1,000 units	\$101,709,055
Retail/shopping	1,000 units	\$67,629,803
Entertainment/recreational activities	1,000 units	\$44,203,972
Total		\$213,542,830

Source: RRC Associates; Economic & Planning Systems

Jobs, Employees, and Households

As shown in **Table 3**, the spending associated with 1,000 accommodation units supports 2,292.82 jobs. The industries with the most jobs are those with direct spending impacts – specifically accommodation and food services, arts entertainment and recreation, and retail.

Following total jobs, the next step is to translate jobs to employees. In today’s economy it is common for people to hold more than one job. To step down from jobs to employees, jobs are divided by a factor of 1.71 jobs per employee. As shown in **Table 3**, the 2,292.82 jobs supported by 1,000 accommodation units results in 1,340.83 employees after the adjustment for multiple job holders.

Table 3. Jobs and Employees by Industry Supported from Guest Spending

Description	Guest Spending	
	Jobs by Industry (IMPLAN Results)	Employees by Category
Jobs to Employee Conversion Factor		1.71
Industrial Sectors		
11 Ag, Forestry, Fish & Hunting	3.47	2.03
21 Mining	0.30	0.18
22 Utilities	3.38	1.98
23 Construction	8.06	4.71
31-33 Manufacturing	1.06	0.62
42 Wholesale Trade	15.21	8.89
44-45 Retail trade	333.65	195.12
48-49 Transportation & Warehousing	20.97	12.26
51 Information	8.06	4.71
52 Finance & insurance	23.54	13.77
53 Real estate & rental	73.03	42.71
54 Professional- scientific & tech svcs	46.76	27.35
55 Management of companies	8.89	5.20
56 Administrative & waste services	54.58	31.92
61 Educational svcs	8.87	5.19
62 Health & social services	38.73	22.65
71 Arts- entertainment & recreation	420.91	246.15
72 Accomodation & food services	1,180.87	690.57
81 Other services	39.52	23.11
91-99 Government & non NAICs	<u>2.96</u>	<u>1.73</u>
Total	2,292.82	1,340.83

Source: IMPLAN; Economic & Planning Systems

Employee to Household Conversion

To translate employees to households and their related income levels, the analysis steps are as follows:

- **Employees by Occupation** – The jobs by NAICS classification are converted to more specific occupation categories to obtain a more detailed distribution of wage levels for the new jobs, since using the average wage for an industry masks the upper and lower wage levels. The BLS National Industry by Occupation Matrix provides the estimated distribution of occupations for each NAICS category. The wages for each occupation in Summit County are estimated by indexing the wages by occupation and industry in Colorado to the average wage in that industry for Summit County.
- **Employees to Households** – The next adjustment for estimating housing demand is to account for multiple earners per household. On average, there are 1.90 earners per household in Upper Blue Basin. This adjustment reduces the 1,340.83 employees supported from guest spending in 1,000 accommodation units to 705.70 employee-households.
- **Wages and Household Income** – The next step in the employee and household analysis is to estimate household incomes accounting for the wages from the primary and secondary earners in the household. The primary earner – the jobs estimate from the IMPLAN analysis – is assigned the average wage for their industry and occupation. The second 0.90 earner (totaling 1.90 earners per household) is assumed to make the average wage for the industry in which the primary earner is employed.

Households and Target Income Ranges

The last step in the guest spending analysis is to tabulate the employee-households at income levels of 150 percent of AMI or less. For guest spending in 1,000 accommodation units, there are 683.1 employee households supported below 150 percent of AMI, as shown in **Table 4**. Of the 705.7 total employee-households supported, 96.8 percent are at incomes of 150 percent of AMI or less. The balance of 3.2 percent are compensated sufficiently to afford market rate housing. These are the employee households needed to support the spending in the economy from 1,000 STR units.

Table 4. Households by AMI Supported by Guest Spending

	Guest Spending - All
Total Households Generated per 1,000 Units	705.7
Households by Income Range	
30% of Median	0.0
50% of Median	95.5
80% of Median	133.4
100% of Median	374.6
120% of Median	49.6
150% of Median	30.1
Total - Target Income Ranges	683.1
Percent of Households Generated	96.8%

Source: Economic & Planning Systems

Employee-Household Housing Gap

To determine affordability needs, the gap for households earning up to 150 percent AMI (by AMI category) is calculated based on the cost to purchase a home in the town, estimated using the median cost for all homes (excluding deed restricted properties). Housing costs were based on sales during the three year period from 2018 through 2020. This calculation assumes an income for a 2.5 person household as a proxy for an average household size, and uses CHFA income levels for Summit County as those are the income definitions used in most housing qualification processes.

As shown in **Table 5**, affordable prices at these AMI levels range from \$50,700 at 30 percent of AMI to \$501,400 at 150 percent AMI. With a median home cost of \$876,000, the gap per unit ranges from \$825,300 at 30 percent AMI to \$374,600 at 150 percent AMI.

Table 5. Affordable Price and Gap by Income Range

Description	Factor	AMI					
		30%	60%	80%	100%	120%	150%
HH Income and Housing Expense							
HH Income	2.5 pp/hh	\$24,480	\$48,960	\$65,280	\$81,600	\$97,920	\$122,400
Affordable Monthly Housing Cost	30%	\$612	\$1,224	\$1,632	\$2,040	\$2,448	\$3,060
Supportable Monthly Payment							
Less: Insurance	\$2,500/year	-\$208	-\$208	-\$208	-\$208	-\$208	-\$208
Less: Property Taxes	7.15% ass't rate 57,537	-\$20	-\$60	-\$90	-\$110	-\$130	-\$170
Less: Miscellaneous (e.g. HOA Dues)	\$1,500/year	-\$125	-\$125	-\$125	-\$125	-\$125	-\$125
Net Supportable Mortgage Payment (Monthly)		\$259	\$831	\$1,209	\$1,597	\$1,985	\$2,557
Valuation Assumptions							
Loan Amount		\$48,200	\$154,700	\$225,200	\$297,400	\$369,700	\$476,300
Mortgage Interest Rate		5.0% int.	5.0% int.	5.0% int.	5.0% int.	5.0% int.	5.0% int.
Loan Term		30-year term	30-year term	30-year term	30-year term	30-year term	30-year term
Downpayment as % of Purchase Price		5.0% down pmt	5.0% down pmt	5.0% down pmt	5.0% down pmt	5.0% down pmt	5.0% down pmt
Maximum Supportable Purchase Price		\$50,700	\$162,800	\$237,100	\$313,100	\$389,200	\$501,400
Cost per Unit		\$876,000	\$876,000	\$876,000	\$876,000	\$876,000	\$876,000
Gap per Unit		\$825,300	\$713,200	\$638,900	\$562,900	\$486,800	\$374,600

Source: Economic & Planning Systems

Local Resident Spending

To isolate the effect of guest spending on housing need, a similar methodology was followed to determine the relationship between a local resident household and housing need. This was then subtracted from the guest impact.

Local resident spending was modeled based on the median household income in Breckenridge of \$89,403, as reported in the US Census 2019 American Community Survey. As with guest spending, 1,000 households were modeled and per household adjustment is made to calculate the final fee. As shown in **Table 6**, a household income of \$89,403 results in a disposable income of \$64,130 after accounting for payroll tax. Based on these figures, the total disposable income for 1,000 households is \$64.1 million.

Table 6. Local Resident Household Income

Description	Factor	Local Spending
Program		
Households		1,000
HH Income (Breckenridge median)	ACS 2019 5-Yr Estimate	\$89,403
Minus Payroll Tax		
Federal		\$14,548
FICA		\$5,543
Medicare		\$1,296
State		\$3,886
Total Deductions		\$25,273
Net Pay / Adjusted Household Income		\$64,130
Total Spending		
Total Annual Household Income	100%	\$89,403,000
Total Annual Payroll Tax	28%	-\$25,273,490
Disposable Income	72%	\$64,129,510

Source: RRC Associates; Economic & Planning Systems

This income was input to IMPLAN, which then calculates the jobs supported by this household spending. As shown in **Table 7**, 1,000 households earning the median income support 358.57 jobs. Applying the multiple jobholder factor of 1.71 jobs per employee, this spending results in 209.69 employees.

Table 7. Jobs and Employees by Industry Supported from Local Spending

Description	Local Spending	
	Jobs by Industry (IMPLAN Results)	Employees by Category
Jobs to Employee Conversion Factor		1.71
Industrial Sectors		
11 Ag, Forestry, Fish & Hunting	1.52	0.89
21 Mining	0.08	0.05
22 Utilities	1.31	0.77
23 Construction	3.62	2.12
31-33 Manufacturing	0.56	0.33
42 Wholesale Trade	9.32	5.45
44-45 Retail trade	64.00	37.43
48-49 Transportation & Warehousing	10.22	5.98
51 Information	4.45	2.60
52 Finance & insurance	17.27	10.10
53 Real estate & rental	49.96	29.22
54 Professional- scientific & tech svcs	12.48	7.30
55 Management of companies	1.13	0.66
56 Administrative & waste services	17.97	10.51
61 Educational svcs	8.05	4.71
62 Health & social services	57.96	33.89
71 Arts- entertainment & recreation	13.03	7.62
72 Accommodation & food services	50.83	29.73
81 Other services	33.50	19.59
91-99 Government & non NAICs	1.31	0.77
Total	358.57	209.69

Source: IMPLAN; Economic & Planning Systems

These employees were then categorized by occupation and wage and converted into employee households following the same methodology for guest spending. As shown in **Table 8**, local resident household spending supports a total of 110.4 employee-households, 91.4 percent (100.9 households) of which fall at or below 150 percent of AMI. Affordability needs of these households are determined using the same methodology outlined for guest spending.

Table 8. Households by AMI Supported by Local Spending

	Local Spending
Total Households Generated per 1,000 Units	110.4
Households by Income Range	
30% of Median	0.0
50% of Median	3.0
80% of Median	23.8
100% of Median	40.5
120% of Median	20.8
150% of Median	12.9
Total - Target Income Ranges	100.9
Percent of Households Generated	91.4%

Source: Economic & Planning Systems

Fee Calculation

This section outlines the calculation of the accommodation unit license fee. There are four key components to the fee calculation:

- **Households Supported** – The number of households at or below 150 percent of AMI supported by guest spending form the basis of the fee, as these represent employees needed in the community who cannot otherwise afford housing.
- **Occupancy Rate** – The impacts of guest spending were determined assuming 100 percent occupancy (i.e., 365 days per year) for modeling purposes and needs to be adjusted for annual occupancy rates. An occupancy rate of 46.2 percent is applied to the housing demand (total households supported are multiplied by 0.462 to determine the net households supported). This is the average occupancy rate for all short-term accommodations derived from EPS’s analysis of data from Inntopia, who supplies data on the lodging market to the Breckenridge Tourism Office. This occupancy rate reflects multiple years to ensure a representative factor and is the average from 2016 through 2019.
- **Affordability Gap** – The affordability gap per household and AMI range described earlier ranges from \$374,600 at 150 percent of AMI to \$825,300 at 30 percent of AMI. The number of households in each AMI category (after accounting for the occupancy rate) are multiplied by the gap per household to calculate the total affordability gap. This gap is calculated for both guest spending and local spending. Based on this calculation, the gap per accommodation unit is \$184,682 and the gap per local household/housing unit is \$55,051.
- **Adjustment for Local Households** – To isolate the impact of guest spending above the impact of a local household, the gap associated with local household spending (\$55,051) is subtracted from the gap associated with guest spending (\$184,682). This results in a net gap per accommodation unit of \$129,630.

This fee is then adjusted to reflect a per-bedroom figure (rather than per unit). EPS’s analysis of the Town’s STR license database indicates that STRs have an average of 2.0 average bedrooms per unit. This is then annualized over 30 years (divided by 30), which is a typical financing period for a long-term housing investment, and a typical long term planning timeframe for local governments. Based on this analysis, the maximum fee per bedroom is \$2,161, as shown in **Table 9**. This maximum fee amount is the annualized cost of providing housing to the local workforce supported by guest spending.

Final Fee

The fee outlined above represents the maximum reasonable fee to be charged under this program. **The Town has applied a mitigation rate of 35 percent to this fee resulting in a final fee of \$756 per bedroom.**

Table 9. Fee Calculation

		Local Spending	Guest Spending - All
Households Generated (per 1,000 units)	A		
30% of Median		0.0	0.0
50% of Median		3.0	95.5
80% of Median		23.8	133.4
100% of Median		40.5	374.6
120% of Median		20.8	49.6
150% of Median		12.9	30.1
Total per 1,000 Units		100.9	683.1
Per 1.0 Units		0.10	0.68
STR Occupancy Rate	B		46.2%
Net Households Generated (per 1,000 units)	C		
30% of Median	A x B	0.0	0.0
50% of Median		3.0	44.1
80% of Median		23.8	61.6
100% of Median		40.5	173.1
120% of Median		20.8	22.9
150% of Median		12.9	13.9
Total per 1,000 Units		100.9	315.7
Per 1.0 Units		0.10	0.32
Gap per Household by AMI Range	D		
30% of Median		\$825,300	\$825,300
50% of Median		\$713,200	\$713,200
80% of Median		\$638,900	\$638,900
100% of Median		\$562,900	\$562,900
120% of Median		\$486,800	\$486,800
150% of Median		\$374,600	\$374,600
Total Gap	E		
30% of Median	C x D	\$0	\$0
50% of Median		\$2,108,647	\$31,481,780
80% of Median		\$15,194,262	\$39,385,269
100% of Median		\$22,802,458	\$97,458,900
120% of Median		\$10,111,634	\$11,149,340
150% of Median		\$4,834,432	\$5,206,493
Total		\$55,051,433	\$184,681,782
Gap (Fee) per Unit	F		
	E / 1000	-\$55,051	-\$184,682
Net STR Gap per Unit (minus local spend)			-\$129,630
Avg. Number of Bedrooms			2.00
Net STR Gap (Fee) per Bedroom			-\$64,815
Annualized Fee per Bedroom	30 years		\$2,161

Source: Economic & Planning Systems