



TOURISM
ECONOMICS

Economic and Fiscal Impacts of Proposed Vacation Rental Regulation Changes in the City of Big Bear Lake

June 2022

Prepared for:

The City of Big Bear Lake

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1 Introduction

The background of the slide is a blue-tinted photograph of a large, modern building interior. The ceiling is a prominent feature, consisting of a complex, curved grid of structural elements. Below the ceiling, there is a walkway or platform with a railing, and a tall, narrow structure, possibly a column or part of a staircase, is visible in the distance. The overall atmosphere is clean and architectural.

Introduction

Tourism is a key driver of jobs, income, and tax revenues in the City of Big Bear Lake (“the City” or “Big Bear Lake”). The City hosts annual visitor volume many times greater than its year-round population of just over 5,000 residents. In 2021, nearly one million visitors came to Big Bear Lake, mostly during the winter and summer peak seasons. The City was inundated with visitors as a result of COVID-19 pandemic restrictions on recreation and travel and its proximity to the Greater Los Angeles region. Visitors and second homeowners came to Big Bear Lake seeking to get outdoors and avoid the confines of more urban areas.

Big Bear Lake has a hotel room inventory of approximately 1,000 rooms across just over 20 properties. The City’s hotel room inventory represents about 25% of all rooms available for visitors, with most room inventory available in vacation rentals.

Of the City’s 9,400 housing units, just over 20% are occupied by residents, with more than 7,500 units available for seasonal or recreational use. Many units are rented to visitors as vacation rentals, and the City has issued approximately 2,600 rental licenses, which offer an estimated 3,300 rooms for rent.

During the last two years, it has been challenging for the City to manage the influx of visitors staying in vacation rentals. These challenges have included ensuring compliance with registration and licensing regulations of rental units, noise complaints, and insufficient visitor infrastructure such as parking and restroom facilities.

Given increased activity in the vacation rentals segment, the analysis also examined detailed property sales data over the past ten years to identify metrics influencing sales price and to determine if vacation rentals have any effect on property sales prices.

The City recently adopted a new set of vacation rental regulations in the fall of 2021, and citizens are now proposing additional regulations that limit the number of vacation rentals allowed and how often they can be rented.

The key proposed changes to regulation put forth in the initiative include:

1. A city-wide cap of 1,500 vacation rental licenses
2. An annual limit of 30 vacation rental contracts per property
3. A limit of one vacation rental license per owner

This analysis examines the potential impacts of these proposed changes.

Methodology and Data Sources

Tourism Economics' analysis first establishes the context of the total visitor economy in Big Bear Lake. The visitor economy is described in terms of visitor volume separated out by the day and overnight segments and visitor spending by major category such as accommodations, food and beverage, and retail.

This direct visitor spending generates indirect benefits and sales for other businesses in the local economy in the form of business sales, jobs, labor income, and tax revenues.

A significant share of visitors to Big Bear Lake stay in vacation rentals, and the analysis quantifies the importance of this segment within in the visitor economy.

Finally, the analysis explores the potential economic and fiscal impacts of the proposed regulations changes in two scenarios:

1. A short-term (3-yr) time horizon which assumes a proportional change in the reduced number of vacation rentals available in the market that is approximately half of the difference between current registrations and the proposed cap of 1,500 licenses.
2. A long-term (7-yr) time horizon. The long-term horizon assumes the 1,500 limit on rental licenses is reached, and the constraint is binding.

The potential impacts are assessed in the following terms:

1. Visitor volume to Big Bear Lake
2. Visitor spending in Big Bear Lake
3. Tax revenues generated from visitor spending
4. Expenditures associated with mitigating tourism impacts
5. Revenues from licensing and fines from compliance efforts
6. Employment generated by visitor spending in the City
7. Income generated by visitor spending in the City
8. Impacts on population and local school enrollment
9. Concerns regarding local workforce housing

Methodology and Data Sources

Key data sources in the analysis include:

1. STR hotel market data covering supply, demand, revenues, occupancy, and average room rates.
2. Data covering the vacation rental segment of the market from AirDNA
3. Visitor profile data from Datafy and Buxton covering volume estimates, visitor segmentation (day vs overnight), seasonality, and length of stay in Big Bear Lake.
4. Data from the U.S. Census Bureau on population, households, housing units, vacancy characteristics, commuting patterns, and jobs by industry.
5. Jobs and wage data from the Bureau of Economic Analysis (BEA) and the Bureau of Labor Statistics (BLS)
6. Data provided by the City of Big Bear Lake covering vacation rental licenses, complaints, violations, and fines.
7. Data provided by the City covering sales tax by category and Transient Occupancy Tax (TOT) revenues separated out by vacation rentals and other TOT revenues.
8. City budget data contained in the FY2021 audited financial filing, the adopted budget for FY2022, and data on staffing, payroll and certain revenues and expenditures obtained directly from the City.
9. Data covering real estate transactions were also provided by the City including sales amount, property characteristics, and location.

2 Key Findings



Key Findings

- Vacation rentals account for a significant share of Big Bear Lake’s visitor economy, and the proposed changes to regulations would likely place significantly binding limits on rentals. As a result, the proposed change to vacation rentals regulations could potentially have severe impacts on the local economy including:
 - A reduction in visitor volume by **437,000 annual visitors (-47%)**
 - Lower direct visitor spending by **\$250 million (-57%)**, which would result in **\$289 million** in total lost economic activity
 - Support **2,100 fewer jobs** and **\$50 million** less in local labor income
 - Local government would receive an estimated **\$12 million per year less in tax revenues**.
- The impacts could also generate additional impacts on the regional population by reducing the number of households and school enrollment.
- The analysis of property sales over the past ten years indicated that the presence of vacation rental properties does not have a significant effect on property sale prices.

Potential lost activity attributable to proposed vacation rental regulations

Direct Impacts



-437,000

Reduced Visitor
Volume



-\$250M

Reduced Visitor
Spending

Total Economic Impacts



-\$289M

Total Economic
Impact of
Reduced Visitor
Spending



-2,100

Total Reduction
in Jobs



-\$12M

Annual
Reduction in
Local Tax
Revenues

3 Visitor Economy in Big Bear Lake

Visitor Economy Trends

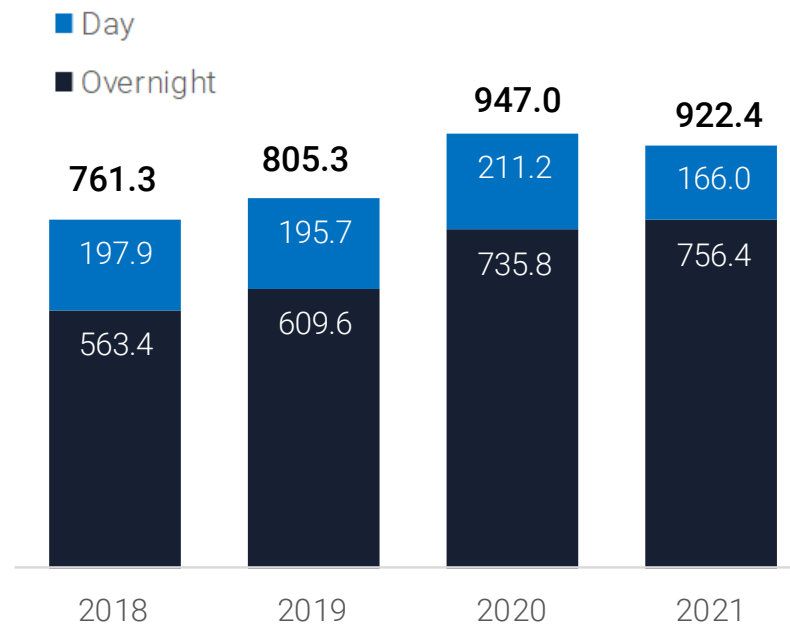
Total visitor volume

Visitor volume jumped in 2020 due to the COVID-19 pandemic

- Visitor volume in Big Bear Lake reached an estimated 947,000 in 2020, representing an 18% increase over 2019 visitation.
- Total volume was flat in 2021, driven by lower day visitation, but the overnight segment of the market continued to grow, increasing nearly 3% over 2020 overnight visitation levels.
- In 2021, a total of 756,400 overnight visitors came to Big Bear Lake and accounted for 82% of total visitation volume.

Total Visitor Volume to Big Bear Lake

Visitors in thousands



Sources: Datafy, STR, AirDNA, Tourism Economics

Visitor Economy Trends

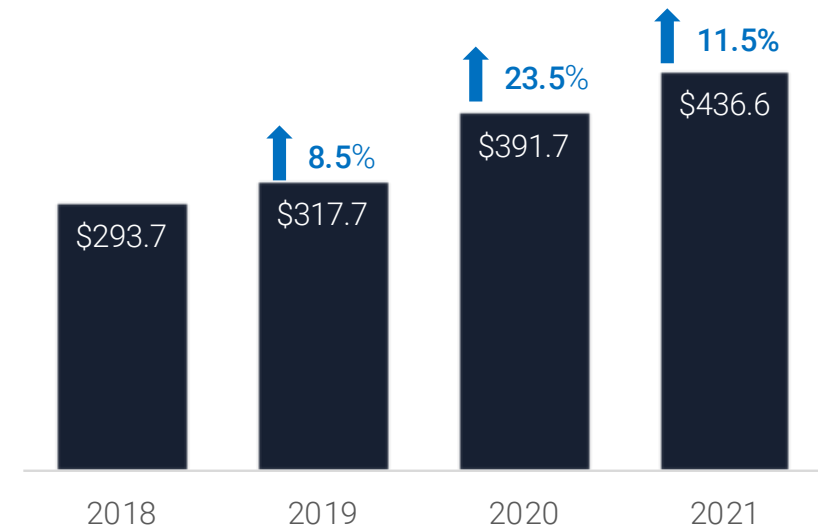
Total visitor spending

Visitor spending expanded 11.5% in 2021

- Overnight visitors stay longer and spend more than day visitors, so although visitation volume was flat in 2021, spending continued to expand, driven by higher overnight visitor volume.
- Total direct visitor spending reached nearly \$437 million in 2021, representing an 11.5% increase over 2020 spending levels, and approximately 49% higher than 2018 spending levels.
- This pace of visitor spending averages to more than 10% growth per year between 2018 and 2021.

Total Visitor Spending

Amounts in millions of nominal dollars



Sources: Datafy, STR, AirDNA, Tourism Economics

Tourism Economy Trends

Visitor spending by category

Visitor spending expanded 11.5% in 2021

- Growth in direct visitor spending in 2021 was led by accommodations (which expanded 26% over 2020 spending levels), followed by spending on transportation.
- Transportation spending was driven in part due to significantly higher gas prices in 2021 than in 2020.
- Spending in other categories was weighed down by lower day volumes.

Big Bear Lake Visitor Spending by Segment

Amounts in millions of nominal dollars

	2018	2019	2020	2021	2021 Growth
Total visitor spending	\$293.7	\$317.7	\$391.7	\$436.6	11.5%
Accommodation	\$76.1	\$85.2	\$118.5	\$149.1	25.9%
Food and beverage	\$36.1	\$40.2	\$50.7	\$52.7	3.8%
Retail	\$116.5	\$122.2	\$139.8	\$147.1	5.2%
Recreation	\$48.1	\$51.8	\$62.4	\$62.8	0.7%
Transportation	\$16.8	\$18.4	\$20.4	\$25.0	22.3%

Sources: Datafy, STR, AirDNA, Tourism Economics

Economic Impact Approach

How visitor spending generates employment and income

Our analysis of visitor spending in Big Bear Lake begins with direct spending, but also considers the downstream effects of this injection of spending into the local economy. To determine the total economic impact in the City, we input direct visitor spending into a model of the San Bernardino County regional economy created in IMPLAN. Adjustments were made to modeling output to capture impacts in the City and not the broader economy. The model calculates three distinct types of impact: direct, indirect, and induced.

The impacts on business sales, jobs, wages, and taxes are calculated for all three levels of impact.

- 1. Direct Impacts:** Visitors create direct economic value within a discreet group of sectors (e.g., recreation, transportation). This supports a relative proportion of jobs, wages, taxes, and GDP within each sector.
- 2. Indirect Impacts:** Each directly affected sector also purchases goods and services as inputs (e.g., food wholesalers, utilities) into production. These impacts are called indirect impacts.
- 3. Induced Impacts:** Lastly, the induced impact is generated when employees whose wages are generated whether directly or indirectly by visitors, spend those wages in the local economy.

IMPLAN is particularly effective because it calculates these three levels of impact – direct, indirect, and induced – for a broad set of indicators. These include the following:

- Spending
- Wages
- Employment
- Federal Taxes
- State Taxes
- Local Taxes



Economic Impacts

Business sales impacts by industry

- Visitors to Big Bear Lake spent \$437 million in the City in 2021.
- This supported a total of \$505 million in total business sales when indirect and induced impacts are considered.
- Note that vacation rentals are included in the Finance, Insurance, and Real Estate industry (FIRE).

Summary Business Sales Impacts

(\$ millions) 2021



Business Sales Impacts by Industry

(\$ millions) 2021

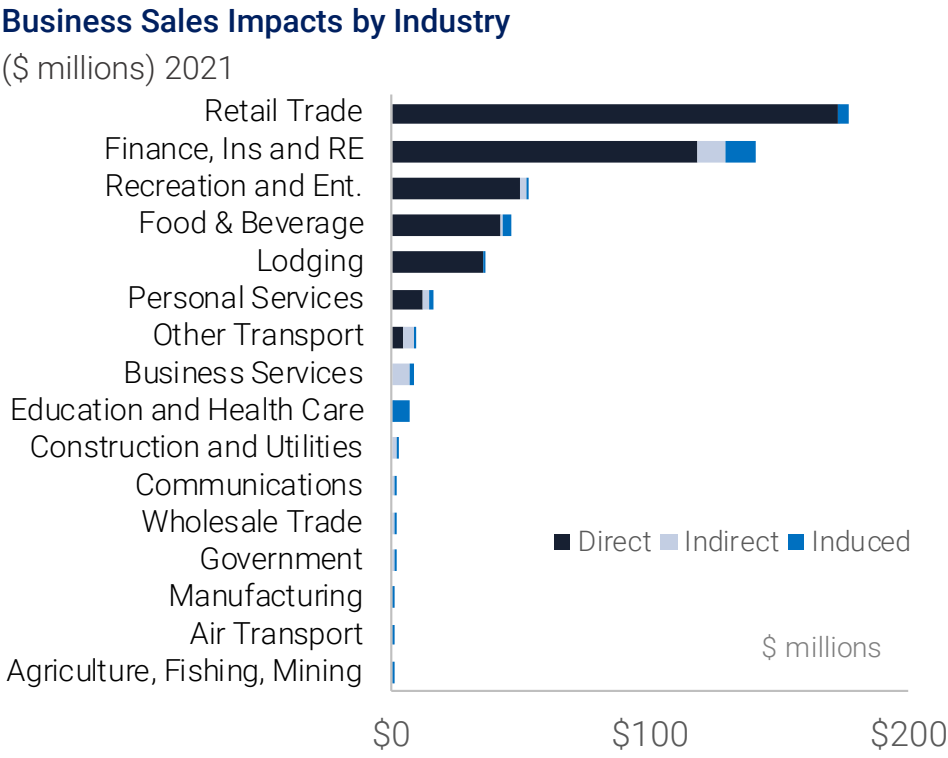
	Direct Business Sales	Indirect Business Sales	Induced Business Sales	Total Business Sales
Total, all industries	\$436.6	\$35.0	\$33.2	\$504.8
By industry				
Retail Trade	172.6	0.8	4.0	\$177.4
Finance, Ins and RE	118.2	11.2	11.4	\$140.8
Recreation and Ent.	50.2	2.2	0.3	\$52.7
Food & Beverage	42.1	1.4	2.7	\$46.2
Lodging	35.9	0.0	0.0	\$35.9
Personal Services	12.6	1.7	2.3	\$16.6
Other Transport	5.0	3.5	0.9	\$9.4
Business Services	0.0	7.4	1.8	\$9.1
Education and Health Care	0.0	0.2	6.7	\$6.9
Construction and Utilities	0.0	2.4	0.7	\$3.1
Communications	0.0	1.6	0.6	\$2.2
Wholesale Trade	0.0	1.0	1.0	\$2.0
Government	0.0	1.2	0.8	\$2.0
Manufacturing	0.0	0.4	0.2	\$0.5
Air Transport	0.0	0.0	0.0	\$0.1
Agriculture, Fishing, Mining	0.0	0.0	0.0	\$0.0

Source: Tourism Economics

Economic Impacts

Business sales impacts by industry

- While the majority of sales are in industries directly serving visitors, approximately \$19 million in business sales were in finance, insurance and real estate as a result of selling to tourism businesses.
- Total indirect and induced benefits sum to more than \$68 million in business sales.



Source: Tourism Economics

Economic Impacts

Personal income impacts by industry

Visitors generated \$70 million in direct personal income and \$88 million in total personal income when indirect and induced impacts are considered.

Summary Personal Income Impacts

(\$ millions) 2021



Personal Income Impacts by Industry

(\$ millions) 2021

	Direct Personal Income	Indirect Personal Income	Induced Personal Income	Total Personal Income
Total, all industries	\$70.0	\$8.9	\$8.9	\$87.7
By industry				
Retail Trade	24.3	0.2	1.3	\$25.8
Food & Beverage	13.3	0.6	0.9	\$14.8
Recreation and Ent.	12.9	0.2	0.1	\$13.2
Lodging	13.0	0.0	0.0	\$13.0
Personal Services	3.0	0.8	1.0	\$4.8
Finance, Ins and RE	3.1	1.1	0.5	\$4.8
Business Services	0.0	2.9	0.7	\$3.6
Education and Health Care	0.0	0.1	3.5	\$3.6
Other Transport	0.3	1.6	0.3	\$2.2
Government	0.0	0.4	0.3	\$0.7
Construction and Utilities	0.0	0.4	0.1	\$0.6
Wholesale Trade	0.0	0.2	0.2	\$0.4
Communications	0.0	0.1	0.1	\$0.2
Manufacturing	0.0	0.1	0.0	\$0.1
Air Transport	0.0	0.0	0.0	\$0.0
Agriculture, Fishing, Mining	0.0	0.0	0.0	\$0.0

Source: Tourism Economics

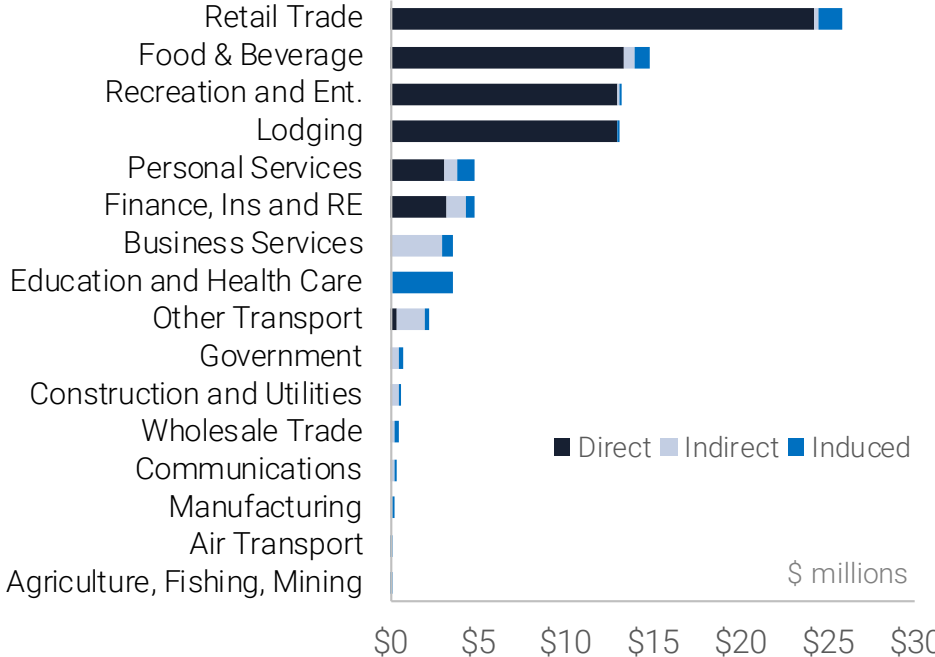
Economic Impacts

Personal income impacts by industry

Most of the personal income impacts are the direct result of visitor spending in retail, food and beverage, recreation, and lodging.

Personal Income Impacts by Industry

(\$ millions) 2021



Source: Tourism Economics

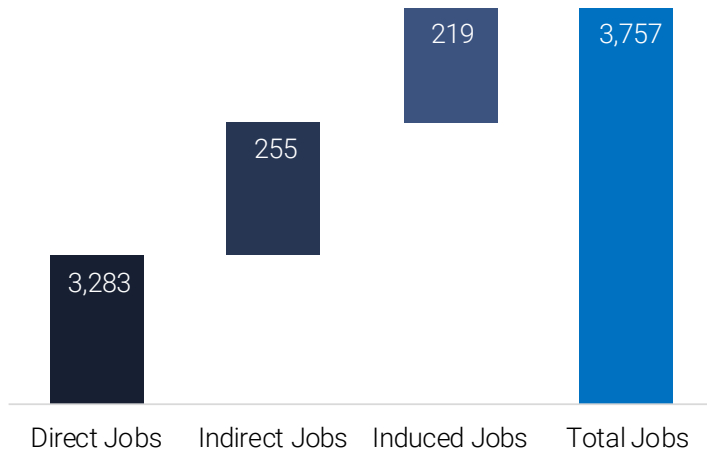
Economic Impacts

Employment impacts by industry

Visitor spending supported a total of 3,757 jobs when indirect and induced impacts are considered.

Summary Employment Impacts

(number of jobs) 2021



Employment Impacts by Industry

(Number of jobs) 2021

	Direct Employment	Indirect Employment	Induced Employment	Total Employment
Total, all industries	3,283	255	219	3,757
By industry				
Retail Trade	1060	7	40	1,107
Recreation and Ent.	899	36	4	939
Food & Beverage	534	19	34	587
Personal Services	358	19	30	407
Finance, Ins and RE	179	53	16	248
Lodging	172	0	0	172
Other Transport	81	33	9	123
Business Services	0	69	16	85
Education and Health Care	0	2	61	63
Construction and Utilities	0	7	2	9
Government	0	4	3	7
Wholesale Trade	0	3	3	6
Communications	0	2	1	3
Manufacturing	0	1	0	1
Agriculture, Fishing, Mining	0	0	0	0
Air Transport	0	0	0	0

Source: Tourism Economics

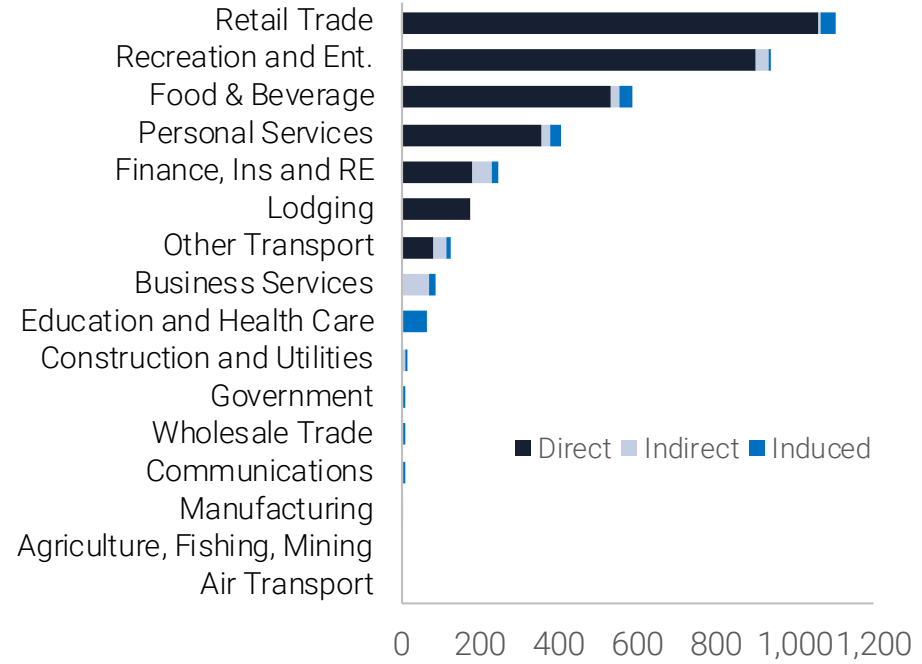
Economic Impacts

Employment impacts by industry

- As a labor-intensive collection of services, visitor spending drives jobs across sectors in Big Bear Lake.
- The 3,757 jobs supported span every sector of the economy, either directly or indirectly.
- The most significant indirect impacts come in business services, education and healthcare, and FIRE.

Employment Impacts by Industry

(\$ millions) 2021



Source: Tourism Economics

Fiscal (Tax) Impacts

Tax impacts by industry

- Total tax revenues driven by visitors and their spending amounted to nearly than \$71 million in (CY) 2021.
- State and local tax revenues totaled \$42.6 million in (CY) 2021, consisting primarily of sales tax, transient occupancy tax (TOT), and property tax.

Fiscal (tax) Impacts

(\$ millions) 2021

Total tax revenues	\$70.8
Local	\$21.8
Sales	\$2.1
Lodging	\$11.4
Property	\$6.4
Other Taxes and Fees	\$1.9
State	\$20.8
Sales	\$13.4
Personal income	\$3.2
Social Security	\$0.6
Corporate	\$1.7
Other Taxes and Fees	\$1.9
Federal	\$28.3
Personal Income	\$8.2
Corporate	\$3.7
Indirect business	\$2.7
Social Security	\$13.5

Source: Tourism Economics

4 The Vacation Rental Segment of the Visitor Economy

Summary of Vacation Rentals in Big Bear Lake

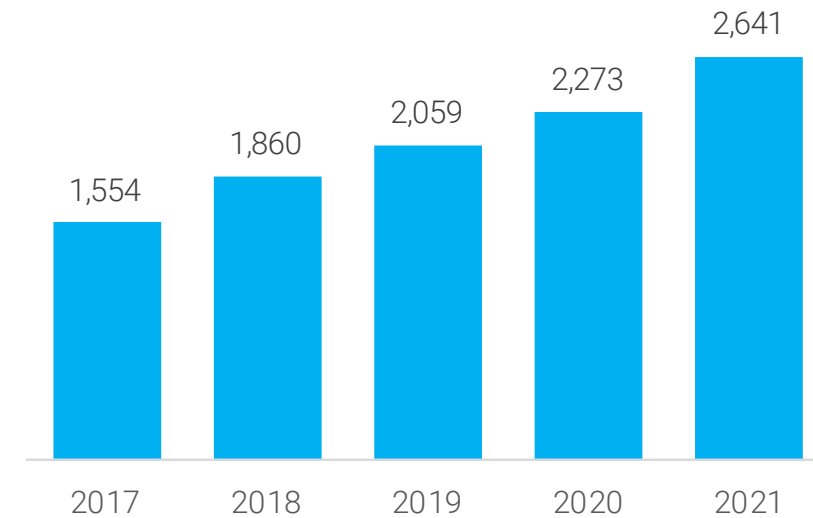
Vacation rentals were on the rise before COVID-19

Vacation rental registrations are expanding

- The number of registrants has expanded in recent years. Since 2017, more than 1,000 additional properties have been registered and issued a rental license.
- Despite the rapid rise in registrants, previous levels of registrants were reportedly undercounted as some properties operated without a license.

Vacation Rental Licenses in Big Bear Lake

Amounts in number of units



Source: City of Big Bear Lake

Vacation Rentals Trends

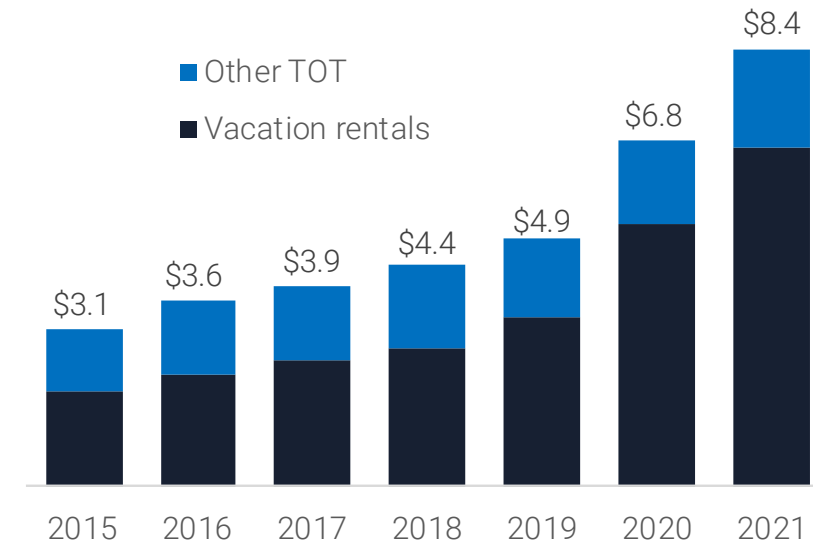
Vacation rentals as a share of the total visitor economy

Vacation rentals accounted for 78% of TOT revenues in 2021

- The vacation rentals markets expanded significantly in 2020 and 2021. Total TOT revenues increased 39% and 26% in 2020 and 2021, respectively.
- Overall, TOT revenues have increased at an average rate of more than 18% per year between 2015 and 2021.
- As a share of total TOT revenues, vacation rentals increased to nearly 78% in 2021 from 60% in 2015.

Transient Occupancy Tax Revenues to the General Fund (6%)

Amounts in millions of nominal dollars



Sources: City of Big Bear Lake, Tourism Economics

Vacation Rentals Trends

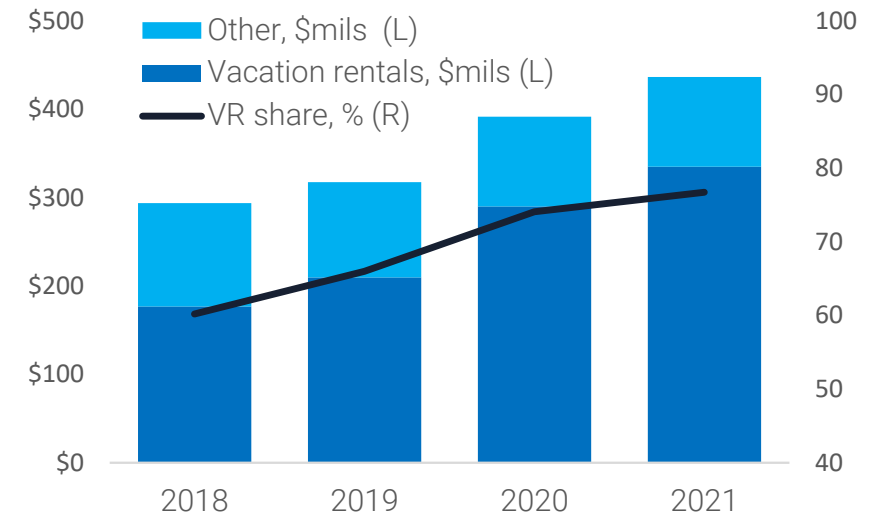
Vacation rentals as a share of the total visitor economy

Spending by vacation rental visitors is increasingly important

- Direct spending by visitors who stay in vacation rentals has expanded rapidly in the last four years and reached \$335 million in 2021.
- Vacation rental direct spending in 2020 expanded 38% over 2019 spending levels.
- Vacation rental direct spending in 2021 expanded 15% over 2020 spending levels.
- As a share of the total tourism market, vacation rentals accounted for 77% of all visitor spending in Big Bear Lake, up from 60% in 2018.

Vacation Rental Direct Spending

Amounts in millions of nominal dollars (L) and % share (R)



Source: Tourism Economics



5 Potential Impact of Proposed Changes to Vacation Rental Regulations

Proposed Change to Regulations

The proposed measure would amend the City of Big Bear Lake Municipal Code to enact further limitations and regulations on “vacation rentals.”

The key points of the initiative are:

1. Establish a city-wide cap of 1,500 vacation rental licenses
2. Establish an annual limit of 30 vacation rental contracts per property
3. Establish a limit of one vacation rental license per owner

The measure would also enact further limitations, regulations and obligations with regards to vacation rental events and gatherings, parking standards, rental contraction information, inspections, and penalties for non-compliance. The binding restrictions of the proposed changes in items 1 to 3 above are examined in this section.

Potential impacts assessed:

1. Change in visitor volume to Big Bear Lake
2. Change in visitor spending in Big Bear Lake
3. Change in tax revenues generated from visitor spending
4. Change in expenditures associated with mitigating tourism impacts
5. Change in licensing revenues and fines from vacation rental compliance efforts
6. Impacts on employment generated by visitor spending in the City
7. Impacts on income generated by visitor spending in the City
8. Impacts on population and local school enrollment
9. Considerations of housing for the local workforce

The Proposed Changes Will Reduce Visitor Volume

Limit of 1,500 licenses and a cap of 30 rental contracts are the binding constraints

Fewer licenses and contracts could translate to 437,000 fewer visitors and \$250 million less in visitor spending

- The proposed change will be achieved through attrition as licenses expire and not be renewed. The actual pace of change in registered units could be slow or fast depending on many factors. Tourism Economics' analysis assumes that the cap will be achieved gradually over time and will be fully binding by the seventh year.
- With the cap binding **and** fewer contracts allowed per property, the lower number of available units would reduce inventory. Since the demand for vacation rentals is sufficiently different from hotel demand, it is unlikely that there would be a significant shift over to hotel inventory.
- Fewer vacation rentals would correspond to 437,000 fewer visitors to Big Bear Lake per year and \$250 million less in direct visitor spending. The 30 contract limit accounts for about 2/3 of the reduction in year 3 and about 40% in year 7.

Changes in VR units, visitor volume, and visitor spending attributable to proposed vacation rental limits and regulations

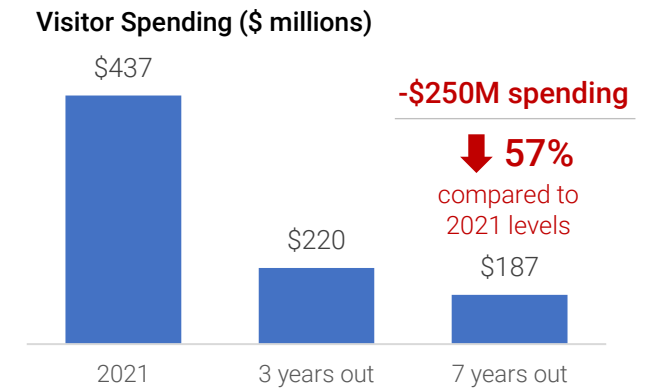
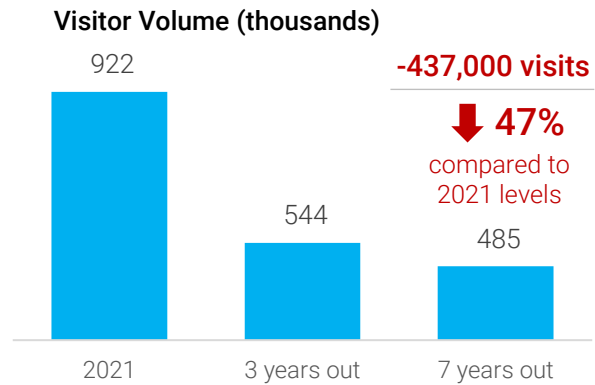
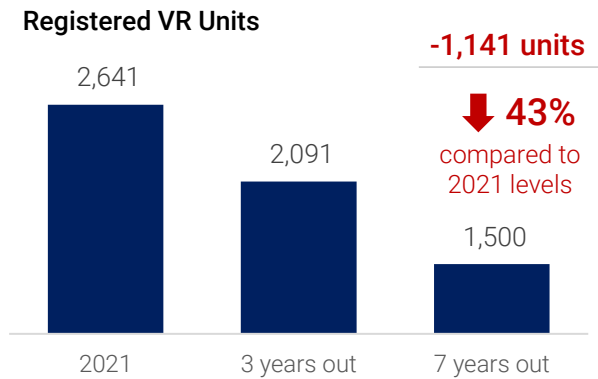
Amounts as indicated

	2021	3 yrs out	7 yrs out
Registered VR units	2,641	2,091	1,500
Change in VR units		-550 -20.8%	-1,141 -43.2%
Total visitor volume, ths	922.4	544.2	485.4
Change in volume		378.2 -41.0%	437.0 -47.4%
Direct visitor spending, \$mils	\$436.6	\$220.4	\$186.8
Change in visitor spending		\$216.2 -49.5%	\$249.8 -57.2%

Source: Tourism Economics

The Proposed Changes Will Reduce Visitor Volume

Limit of 1,500 licenses



Source: Tourism Economics

The Proposed Changes Will Reduce Visitor Spending

Less Direct Spending in the Local Economy

Less direct visitor spending would result in a potential loss of \$289 million in total lost business sales

- While the timing of these changes is impossible to determine, stabilization would be achieved over the long-term, and \$250 million in lost direct visitor spending would correspond with nearly \$290 million in fewer total business sales per year in the local economy (after accounting for lost indirect and induced business sales).
- These changes would be associated with 2,100 fewer jobs, \$50 million in less local labor income, and \$12 million less in local tax revenues on an annual basis.

Reduced economic impacts attributable to proposed vacation rental limits and regulations

Amounts in millions of nominal dollars and number of jobs

	2021	3 yrs out	7 yrs out
Direct spending, \$mils	\$436.6	\$220.4	\$186.8
Reduction in visitor spending		-\$216.2 -49.5%	-\$249.8 -57.2%
Total business sales, \$mils	\$504.8	\$254.8	\$216.0
Reduction in total business sales		-\$250.0 -49.5%	-\$288.9 -57.2%
Employment	3,757	1,896	1,607
Reduction in employment		1,860 -49.5%	2,149 -57.2%
Income, \$mils	\$87.7	\$44.3	\$37.5
Reduction in income		-\$43.4 -49.5%	-\$50.2 -57.2%
Local tax revenues, \$mils	\$21.8	\$11.0	\$9.3
Reduction in local tax revenues		-\$10.8 -49.5%	-\$12.5 -57.2%

Source: Tourism Economics

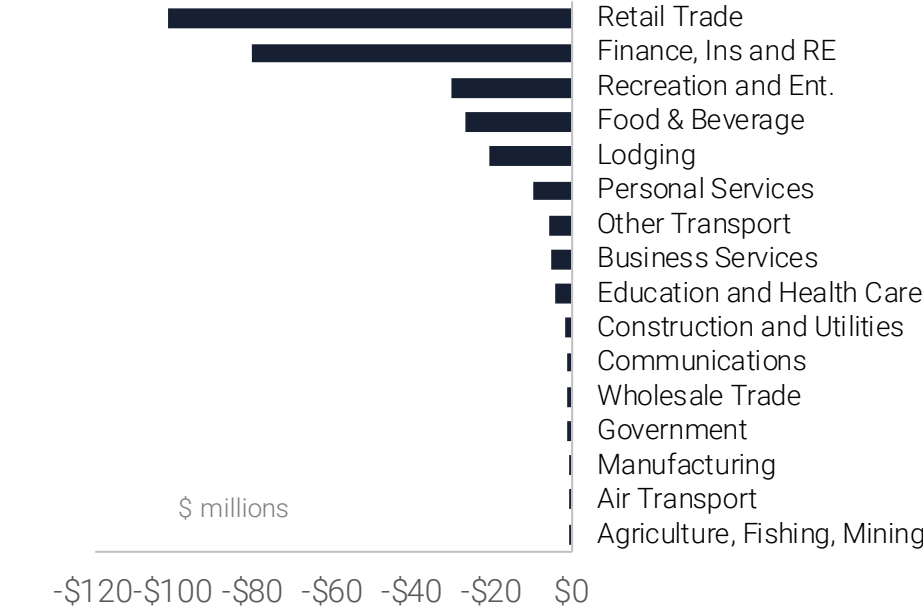
Economic Impacts - Business Sales

Lost sales impacts by industry

The lost sales impacts would be distributed across various industries in the local economy. Retail, finance, insurance and real estate, and recreation would experience the most losses. The total reduced economic impact across all industries would amount to nearly \$290 million in lost business sales per year.

Lost sales impacts attributable to proposed vacation rental limits and regulations, by industry

(\$ millions) 2021



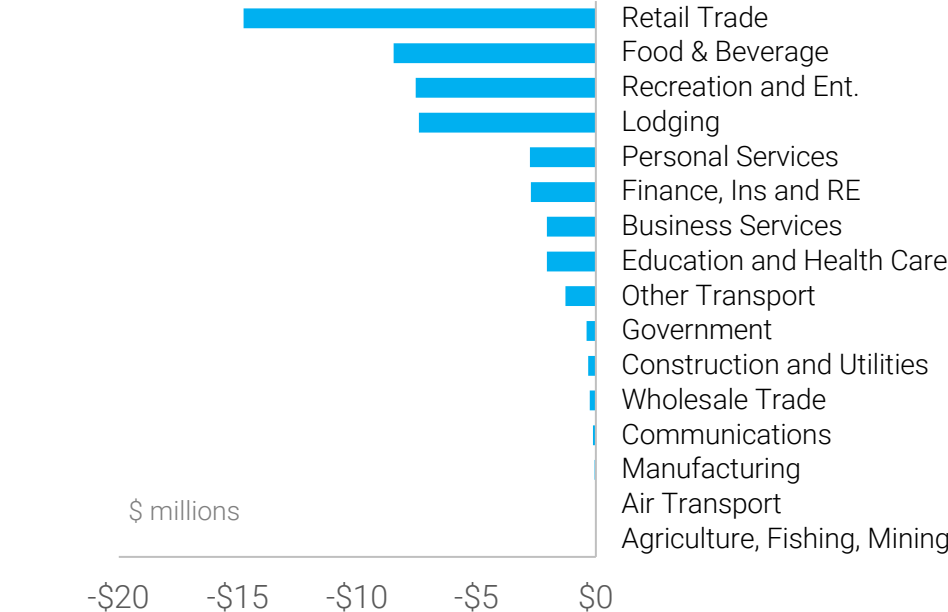
Source: Tourism Economics

Economic Impacts – Personal Income

Personal income impacts by industry

Personal income impacts would be felt most in retail, food and beverage, and recreation. The total impact would amount to just over \$50 million in lost personal income per year.

Lost personal income impacts attributable to proposed vacation rental limits and regulations, by industry
(\$ millions) 2021



Source: Tourism Economics

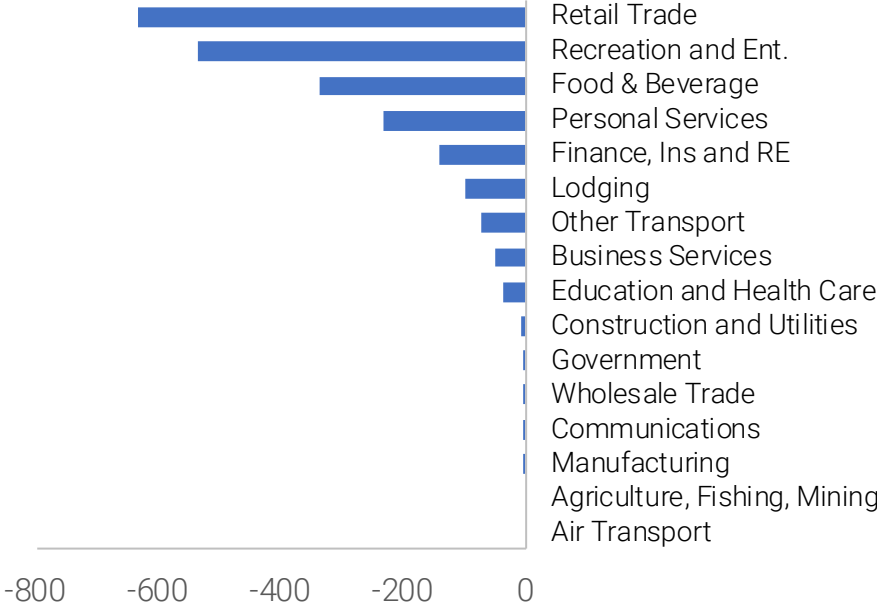
Economic Impacts – Employment

Employment impacts by industry

The jobs impacts would also be distributed across most industries in the local economy. Job losses would be most severe in retail, recreation, and food and beverage. The total impact would amount to 2,100 fewer jobs in the City economy.

Lost employment impacts attributable to proposed vacation rental limits and regulations, by industry

(Jobs) 2021



Source: Tourism Economics

Impacts on Local Government

City of Big Bear Lake Revenues

City revenues would be lower

- Total City revenues would be lower by approximately \$12 million over the long-term.
- Property tax revenues would be lower by nearly \$4 million per year over the long-term.
- While money is fungible and the City would have the ability to shift priorities, raise other revenues, or reduce public services, this level of lower revenues would be associated proportionally with 17 fewer positions in City government and \$2.5 million less in City payroll.

Total City Revenues and Budget Impacts

Amounts in millions of nominal dollars

	2021	3 yrs out	7 yrs out
Total Revenues (FY21), \$mils	\$45.5	\$34.7	\$33.0
Change		-10.8 -23.7%	-12.5 -27.4%
Property tax revenues, \$mils	\$10.3	\$7.2	\$6.7
Change		-3.2 -30.7%	-3.7 -35.4%
City FTE Staff	64	49	46
Change in FTE staff		-15.2 -23.7%	-17.5 -27.4%
City payroll, \$mils	\$9.1	\$6.9	\$6.6
Change in payroll		\$2.2 -23.7%	\$2.5 -27.4%

Source: Tourism Economics

Impacts on Local Government

Tourism management costs and revenues

The cost to ensure compliance would be higher

- With tighter regulations and binding limits, the potential for non-compliance will rise, and enforcement efforts will likely need to be enhanced.
- The analysis assumes that the additional staff and resources required would be similar to the staff and resources that have been added since Tourism Management and enforcement efforts began in 2018 – a change of three staff members and corresponding program resources.
- With compliance and enforcement, staffing and expenditures would stabilize, while revenues from fees and fines would be lower due to fewer units and the smaller market.

Tourism Management Cost and Revenues

Amounts in millions of nominal dollars

	2021	3 yrs out		7 yrs out	
Tourism Management Cost	\$1.3	\$1.8		\$1.8	
Change in costs		\$0.5	37.5%	\$0.5	37.5%
Licensing/Fee revenues, \$mils	\$1.4	\$1.1		\$0.8	
Change in revenues		-\$0.3	-20.8%	-\$0.6	-43.2%

Source: Tourism Economics

Impacts on Local Government

Impacts on population and school enrollment

The BVUSD serves more than 2,200 students in the region

- The Bear Valley Unified School District serves a regional population of nearly 20,000 people, and 8,100 households. The schools have more than 2,200 students enrolled.
- While changes in demographics could happen slower or faster over time, it is assumed a job lost from the local economy corresponds to one less resident. Fewer jobs as a result of the proposed change in regulations would correspond to nearly 1,500 fewer households in the region and 414 fewer students enrolled in the schools.

School Enrollment Impacts

Amounts in persons, households, and children

	2021	3 yrs out	7 yrs out
BVUSD Regional population	19,928	18,068	17,779
Change in population		-1,860 -9.3%	-2,149 -10.8%
BVUSD Regional households	8,123	6,729	6,621
Change in households		-1,394 -17.2%	-1,502 -18.5%
BVUSD total enrollment	2,238	1,854	1,824
Change in enrollment		384 -17.2%	414 -18.5%

Source: Tourism Economics

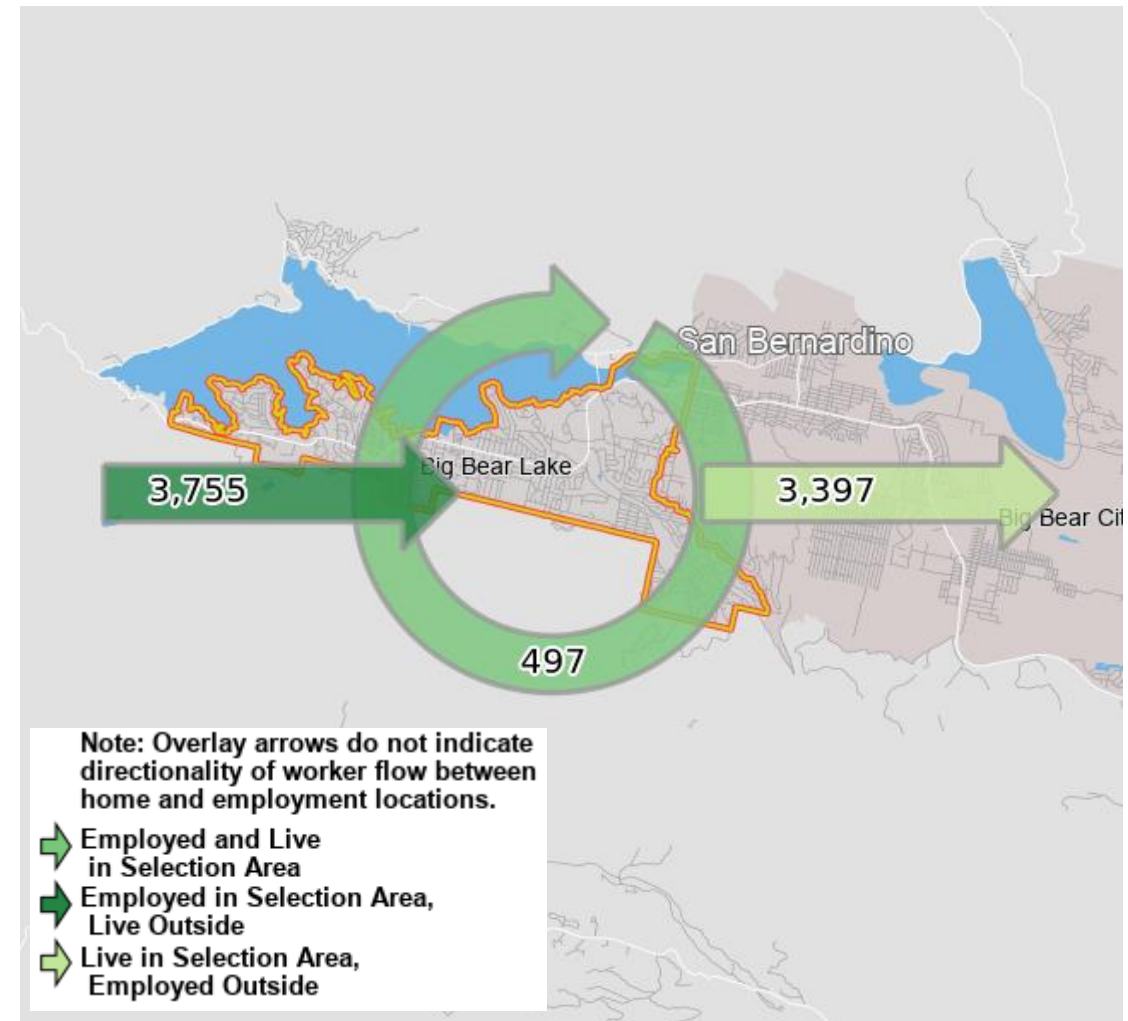
The Local Workforce

Where Big Bear Lake workers live

The workforce is regional - so is the housing challenge.

- Housing units in the City of Big Bear Lake have slightly declined since 2010, but household formation has also declined in the City, and this is the key driver of housing demand. Housing units in Big Bear City have not kept pace with household formation.
- With housing supply not keeping up with housing demand, there is likely an imbalance in the regional stock of housing available for workers, but it appears to be more of an issue outside of the City of Big Bear Lake.
- Based on household growth, the housing shortfall in Big Bear City is just under 2,400 units.

	2010	2020	Ann % ch
City of Big Bear Lake			
Households	2,091	2,044	-0.2%
Housing units	9,705	9,452	-0.3%
Big Bear City			
Households	4,540	5,373	1.7%
Housing units	12,226	12,086	-0.1%



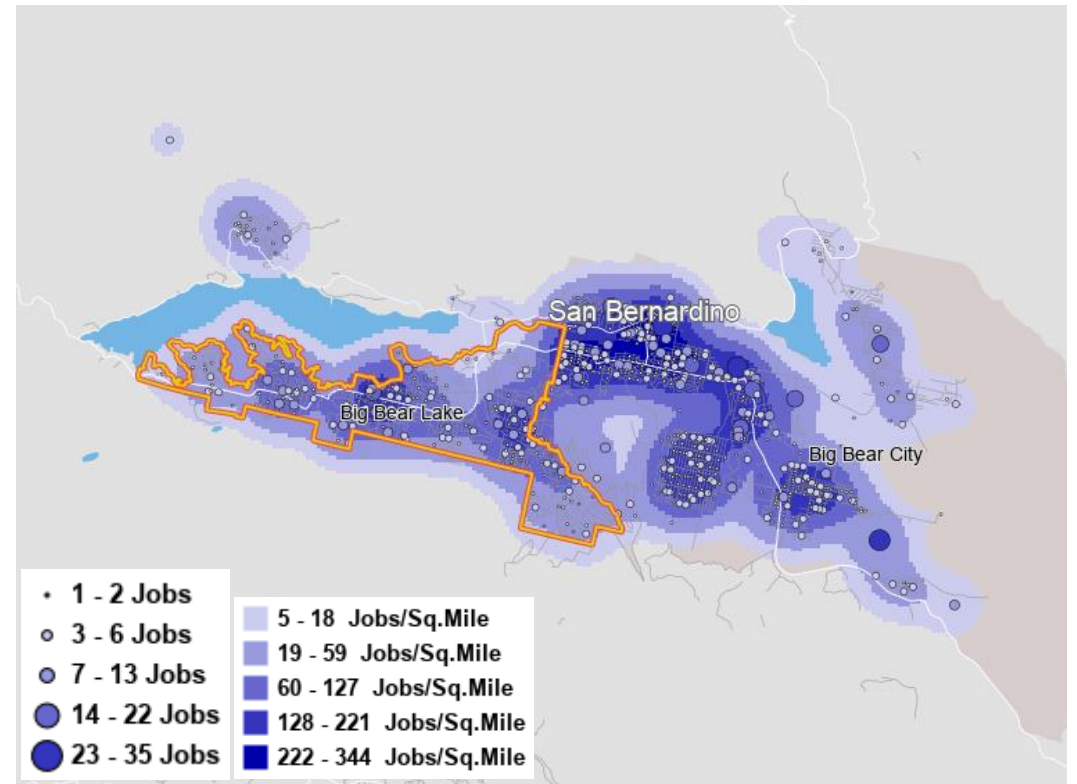
Sources: U.S. Census, Tourism Economics

The Local Workforce

Where Big Bear Lake workers live

Most workers in Big Bear Lake do not live in the City

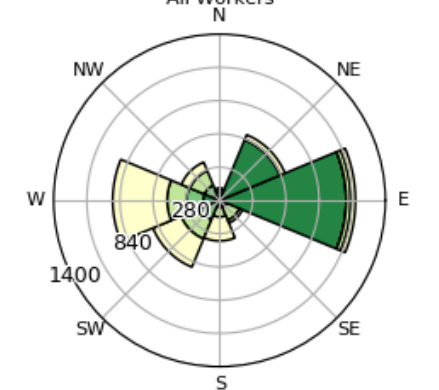
- Based on data from the US Census Bureau, more than 88% of workers in Big Bear Lake are not residents.
- Nearly half of workers in the City live to the east within 10 miles, with many in Big Bear City.
- A smaller share of workers in Big Bear Lake live to the west of the City and commute to the City from a farther distance.
- There are many housing units in Big Bear Lake that are not occupied by residents, but it does not necessarily mean that they will become available for purchase or rent if owners face restrictions on renting units as vacation rentals.
- Most housing units in Big Bear Lake are not occupied by residents; about 7,400 units, nearly 80% of the housing stock, are seasonal or for recreational use. Housing units may sit idle or vacant even more often if they are not rented out.



Jobs by Distance - Work Census Block to Home Census Block

	2019	
	Count	Share
Total All Jobs	4,252	100.0%
Less than 10 miles	1,935	45.5%
10 to 24 miles	468	11.0%
25 to 50 miles	739	17.4%
Greater than 50 miles	1,110	26.1%

Job Counts by Distance/Direction in 2019
All Workers



Sources: U.S. Census Bureau, Tourism Economics

6 Property Value Analysis



Property Value Analysis

Summary metrics

Property sales and average property sales prices experienced significant jumps due to COVID-19 in 2020 and 2021

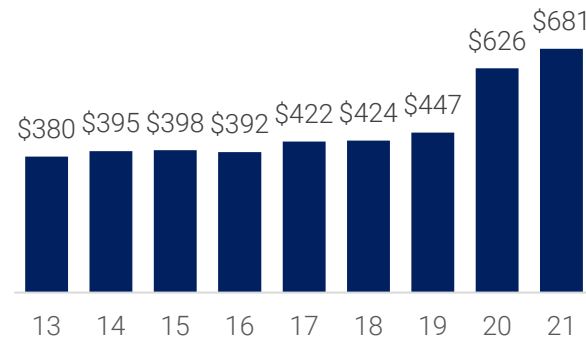
Tourism Economics analyzed detailed property sales data to assess the real estate market in Big Bear Lake and to determine if vacation rentals have any effects on property sales throughout the City. Summary metrics include:

- After averaging 343 property sales per year between 2015 and 2019, the City had 718 property sales in 2020 and 802 property sales in 2021.
- Properties had an average sales price of \$417,000 between 2015 and 2019. The average sales price in 2020 was \$626,000, while the average sales price in 2021 was \$802,000
- Property sales averaged \$307 per sq ft between 2015 and 2019. In 2020, properties averaged \$380 per sq ft, while properties averaged \$481 per sf in 2021.

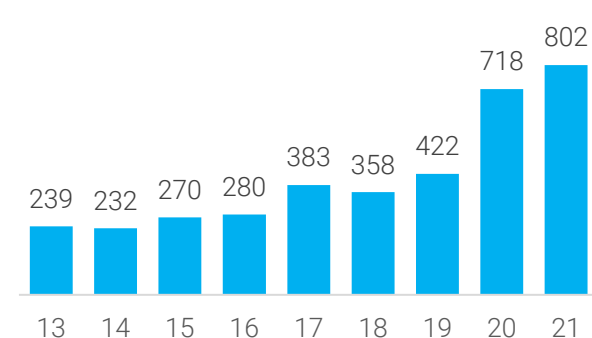
Summary Property Sales Metrics, 2013 to 2021

Amounts as indicated

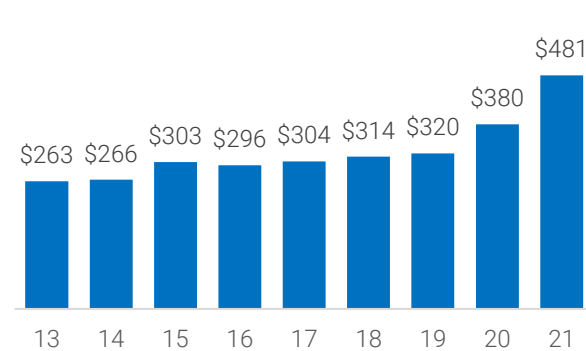
Average Sales Price (\$000s)



Number of Property Sales Transactions



Average Price per SF



Source: Tourism Economics

Property Value Analysis

Hedonic regression analysis

Tourism Economics utilized hedonic regression analysis to determine the main factors influencing property sale prices

Tourism Economics utilized hedonic regression analysis to determine the factors driving sales prices in Big Bear Lake between 2012 and 2022. Overall, hedonic pricing models determine the extent to which various factors affect the market price of properties.

Based on data provided by the City, Tourism Economics' hedonic regression models used property sales prices as the dependent variable and included the following data as independent variables.

- Control variable for median housing value in the property's Census blockgroup
- Number of bathrooms
- Total property living area (sq ft)
- Total property lot area (sq ft)
- Age of property
- Distance to Big Bear Lake (ft)
- Dummy variable for property sales that took place after COVID-19 restrictions began in 2020

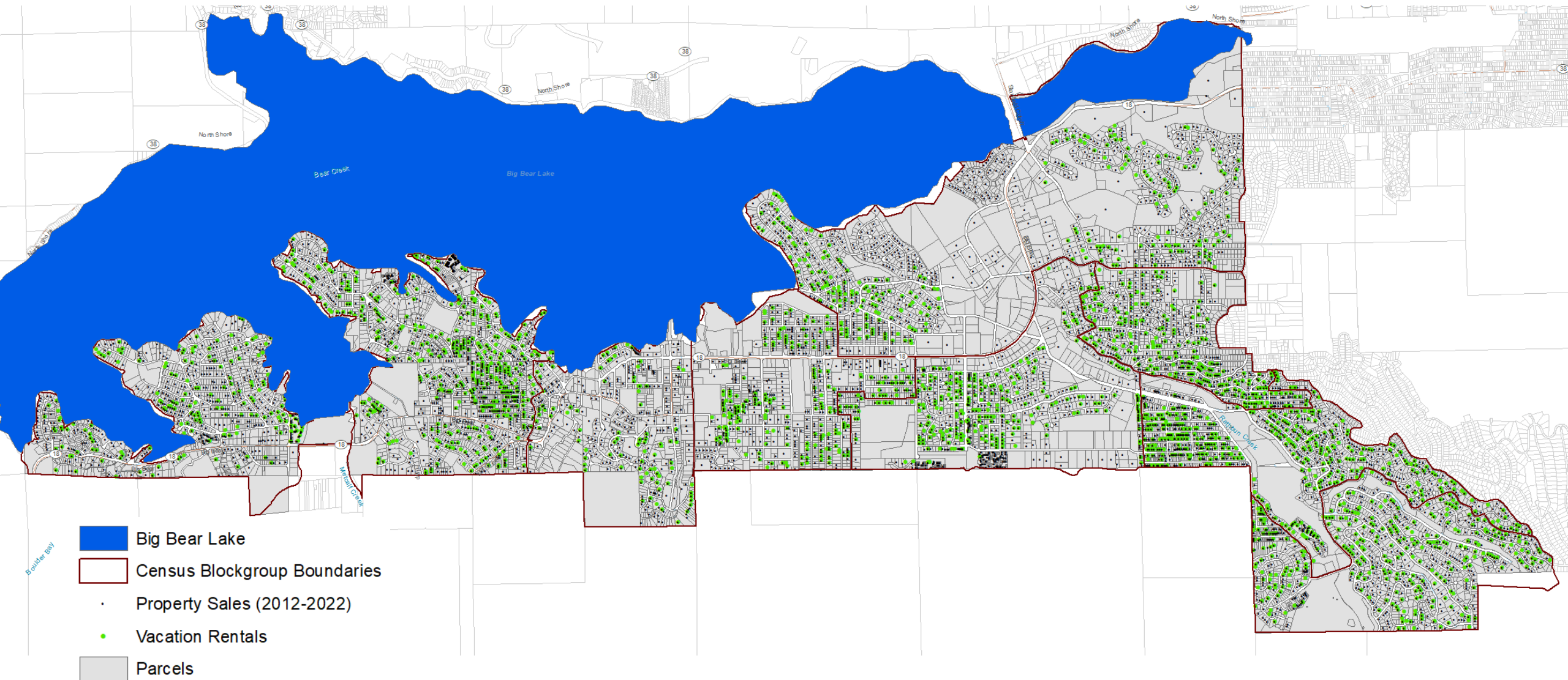
In addition, Tourism Economics utilized GIS (Geographic Information Systems) analysis to map vacation rental properties based on a list of registered vacation rental properties provided by the City. After mapping the vacation rental properties, the research team constructed the following metrics, which served as independent variables in the hedonic regression models:

- Distance (ft) from property to closest vacation rental property
- Number of vacation rental properties within 100ft of each property sale

The map on the following page shows property sales and vacation rental units throughout the City.

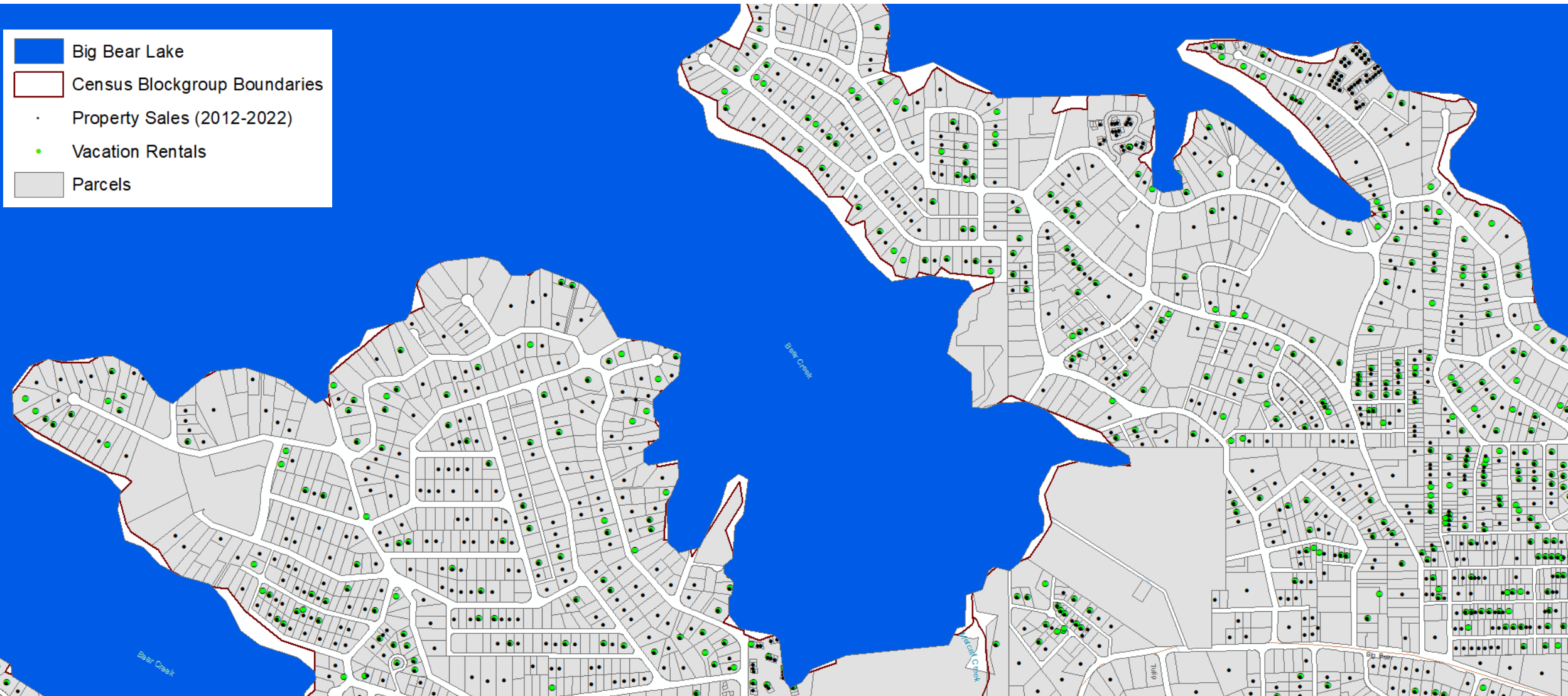
Property Value Analysis

Map of property sales in Big Bear Lake (all properties)



Property Value Analysis

Map of property sales in Big Bear Lake (sample zoom selection)



Property Value Analysis

Summary metrics

The presence of vacation rentals had no significant effect on property sale prices between 2012 and 2021

The accompanying tables summarize the findings of the hedonic regressions with property sales price as the dependent variable. The top table uses the number of neighboring vacation rentals (within 100 ft of each property sale) as the measure of vacation rentals, and the bottom table uses property sales' distance to the closest vacation rental property as the measure of vacation rentals.

- The resulting equations with the differing measures of vacation rentals each had an R-square value of 0.65.
- Total living area, total lot area, number of bathrooms, and distance to Big Bear lake are all significant at the 95% level with p-values less than .05.
- Properties that sold during and after the COVID-19 pandemic had selling prices that were \$217,000 higher, on average, than pre-COVID sales prices
- Both metrics for vacation rentals were insignificant, suggesting the presence of vacation rentals did not have an effect on property sale prices.
 - The number of neighboring vacation rentals within 100 ft was insignificant with a p-value of 0.70.
 - The distance to the closest vacation rental was insignificant with a p-value of 0.30.

Hedonic Regression Results

2012-2021 (Dependent variable: property sales price)

	Coefficient	Standard Error	Statistic	P-value
Median house value	0.03	0.04	0.84	0.40
Number of bathrooms	18,856.89	7,413.11	2.54	0.01
Total living area (sq ft)	281.99	8.22	34.3	0.00
Total lot area (sq ft)	5.03	0.54	9.23	0.00
Property age (years)	-372.91	268.18	-1.39	0.16
Distance to lake	-7.93	1.09	-7.26	0.00
COVID-19 dummy variable	217,636.70	8,335.39	26.11	0.00
Number of neighboring vacation rentals	-1,649.96	4,202.05	-0.39	0.70
Constant	-30,643.16	24,805.21	-1.24	0.22

	Coefficient	Standard Error	Statistic	P-value
Median house value	0.03	0.04	0.77	0.44
Number of bathrooms	18,969.70	7,412.05	2.56	0.01
Total living area (sq ft)	281.42	8.23	34.21	0.00
Total lot area (sq ft)	5.02	0.54	9.33	0.00
Property age (years)	-358.33	268.49	-1.33	0.18
Distance to lake	-7.78	1.10	-7.05	0.00
COVID-19 dummy variable	217,682.20	8,316.42	26.17	0.00
Distance to closest vacation rental	24.73	23.72	1.04	0.30
Constant	-34,277.97	24,182.48	-1.42	0.16

Source: Tourism Economics

 Indicates independent variable has a p-value less than .05 and is significant at 95% level

About Tourism Economics

Tourism Economics is an Oxford Economics company with a singular objective: combine an understanding of the travel sector with proven economic tools to answer the most important questions facing our clients. More than 500 companies, associations, and destination work with Tourism Economics every year as a research partner. We bring decades of experience to every engagement to help our clients make better marketing, investment, and policy decisions. Our team of highly-specialized economists deliver:

- Global travel data-sets with the broadest set of country, city, and state coverage available
- Travel forecasts that are directly linked to the economic and demographic outlook for origins and destinations
- Economic impact analysis that highlights the value of visitors, events, developments, and industry segments
- Policy analysis that informs critical funding, taxation, and travel facilitation decisions
- Market assessments that define market allocation and investment decisions

Oxford Economics is one of the world's foremost independent global advisory firms, providing reports, forecasts, and analytical tools on 200 countries, 100 industrial sectors, and over 3,000 cities. Our best-of-class global economic and industry models and analytical tools give us an unparalleled ability to forecast external market trends and assess their economic, social, and business impact. Headquartered in Oxford, England, with regional centers in London, New York, and Singapore, Oxford Economics has offices across the globe in Belfast, Chicago, Dubai, Miami, Milan, Paris, Philadelphia, San Francisco, and Washington D.C., we employ over 250 full-time staff, including 150 professional economists, industry experts, and business editors—one of the largest teams of macroeconomists and thought leadership specialists.

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