

University of Nevada, Reno  
**Center for Economic Development**



University of Nevada  
Cooperative Extension



# **Mountain Biking and Other Outdoor Tourism**

Economic Assessment, Impact, and  
Opportunities for  
Caliente and Lincoln County, Nevada

**January 2019**

# **Mountain Biking and Other Outdoor Tourism**

## **Economic Assessment, Impact and Opportunities for Caliente and Lincoln County, Nevada**

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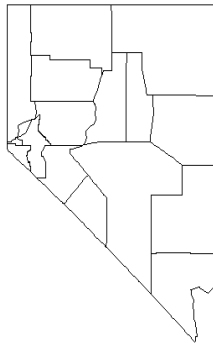
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## **Introduction**

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Lincoln County is approximately 98 percent federally owned and is continually challenged with establishing meaningful economic development projects. However, through years of developing strong relationships with Bureau of Land Management (BLM) and the state parks, outdoor recreation is becoming a promising sustainable economic development driver for the county. It is estimated that nearly 50,000 visitors participate in multiple outdoor recreational events annually.



Recently BLM and Nevada State Parks approved the development of approximately 50 miles of new mountain bike trails that should significantly increase outdoor recreational visitor to Lincoln County. Communities in Lincoln County are in need to better understand different event visitor group impacts (economic and fiscal), needs of these groups and various businesses opportunities to better serve outdoor recreation visitors. The purpose of this study is to assess the business opportunities and impact in Lincoln County from the development and operation of a new Mountain Biking trails originating from Caliente, Nevada.

## **Lincoln County Socioeconomic Trends**

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Social and economic characteristics of a community are one of the first steps in understanding how a community may respond to change. Understanding social and economic trends provide a baseline that can be used for future planning and proposed development. This becomes even more important for Lincoln County because of the inherited challenges from the large percentage of public lands, limited economic development opportunities, small population bases, and the overall investment requirements for meaningful infrastructure. So understanding the socioeconomic traits of Lincoln County can be very useful. Key socioeconomic indicators are discussed in the following pages.

## Population

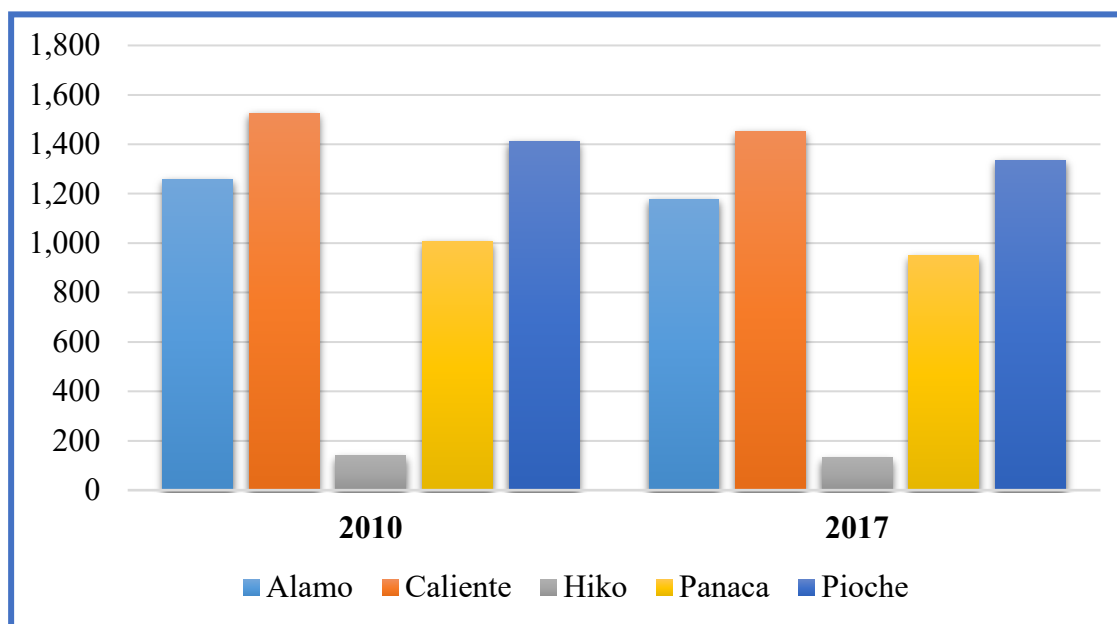
- Overall Lincoln County population has decreased 298 residents or 5.58% between 2010 and 2016.
- Alamo, Pioche, and Caliente, the three largest population centers in Lincoln County, reported a loss of 229 residents or over 76 percent of the county's total population loss between 2010 and 2016.

Table 1. Population Trends for Lincoln County Communities.

Zip Code	Community	2010	2016	% Change
89001	Alamo	1,258	1,178	-6.36%
89008	Caliente	1,525	1,452	-4.79%
89017	Hiko	140	131	-6.43%
89042	Panaca	1,008	948	-5.95%
89043	Pioche	1,412	1,336	-5.38%
	Total	5,343	5,045	-5.58%

Source: 2012-2016 American Community Survey 5-year estimates

Figure 1. Lincoln County Population, 2010 & 2016.





## Age

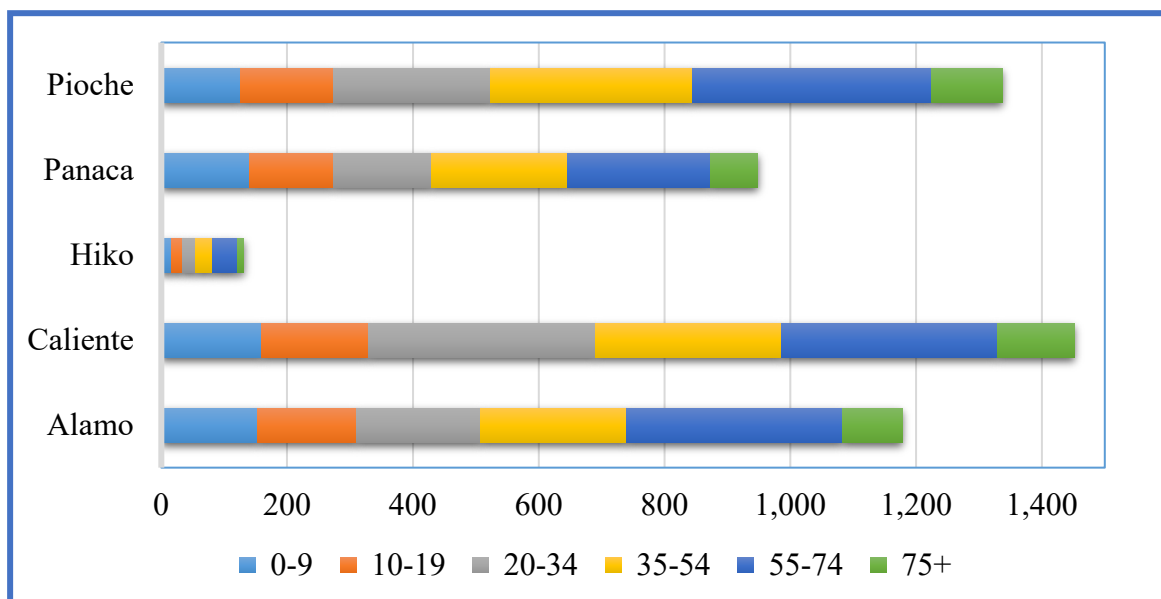
- Over 41 percent of Lincoln County's population is between the ages 20 and 54, followed by 35 percent of the population 55 years and older. The smallest concentration of population is 19 years and younger accounting for approximately 24 percent of the total county's population.
- Each community in Lincoln County has a high concentration of residents between the ages 55-74, representing between 23 to 30 percent of each total community's population.
- Caliente's largest population segment is between 20 to 34 years (25%) followed by residents between 55 to 74 (23%) and residents between 35 and 54 years (20%)

Table 2. Age Distribution for Lincoln County Communities, 2016.

Zip Code	Community	0-9	10-19	20-34	35-54	55-74	75+
89001	Alamo	153	158	197	232	343	95
89008	Caliente	160	170	360	296	343	123
89017	Hiko	16	18	21	27	39	10
89042	Panaca	140	133	157	215	228	75
89043	Pioche	126	147	250	321	381	112
	Total	595	625	985	1,091	1,333	416

Source: 2012-2016 American Community Survey 5-year estimates.

Figure 2. Lincoln County Age Distribution, 2016.



## Education

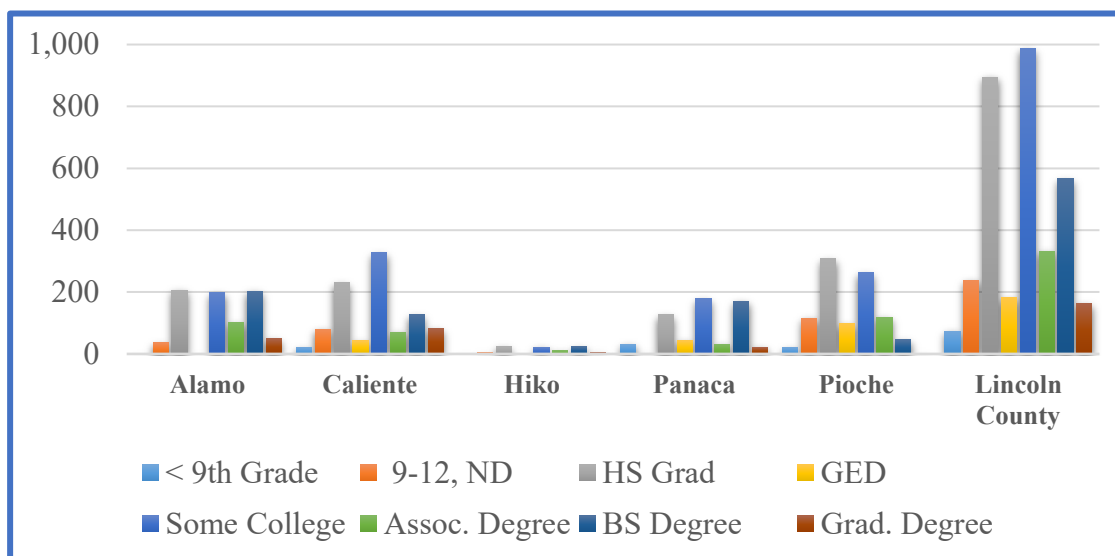
- Approximately 9 percent of Lincoln County residents 25+ years of age have not earned a high school diploma. Over 14 percent of Pioche residents have not earned a high school diploma, followed by Caliente (10%) and Panaca (5%) that have not earned a high school diploma.
- Over 31 percent of Lincoln County residents highest level of education is a high school diploma or GED. While over 28 percent have some college and over 31 percent have an associate degree, bachelor degree or graduate degree.

Table 3. Highest Education Attained, 25+ Years for Lincoln County Communities, 2016.

2016	89001 Alamo	89008 Caliente	89017 Hiko	89042 Panaca	89043 Pioche	Total Lincoln
<b>Population Age 25+</b>	794	979	89	606	969	3,439
<b>Less than 9<sup>th</sup> grade</b>	0	21	0	31	21	73
<b>9-12, No Diploma</b>	36	80	4	3	115	238
<b>High School Grad.</b>	206	231	23	127	308	895
<b>GED/Alternative</b>	0	42	0	43	97	182
<b>Some College</b>	198	327	22	178	262	986
<b>Associate Degree</b>	102	70	11	31	118	332
<b>Bachelor Degree</b>	203	126	24	171	46	567
<b>Grad/Prof. Degree</b>	49	82	5	22	2	162

Source: 2012-2016 American Community Survey 5-year estimates.

Figure 3. Lincoln County Educational Attainment, 2016.



## Household Income

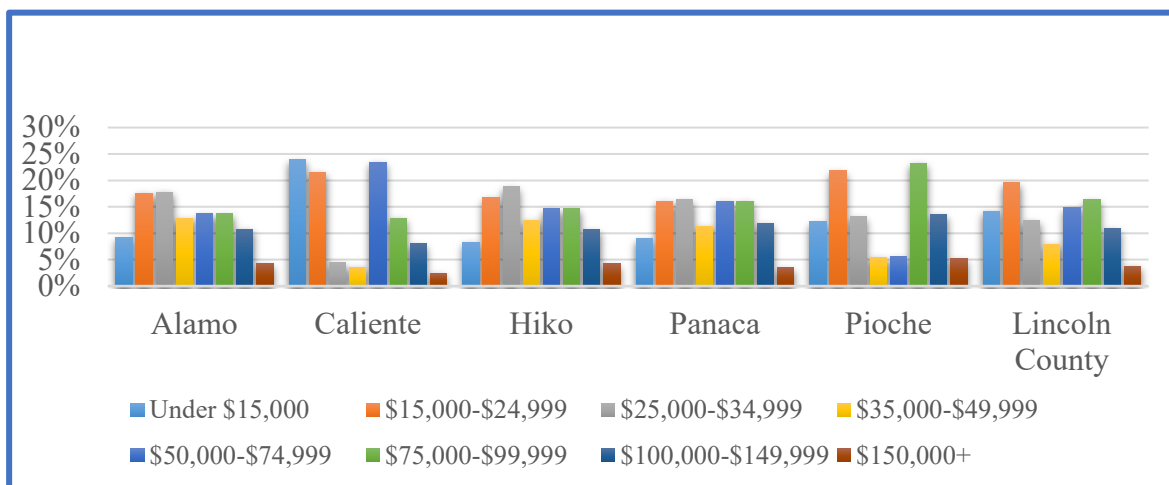
- Over 46% of Lincoln County households report incomes less than \$35,000, followed by 23 percent between \$35,000 and \$74,999 and 31 percent over \$75,000.
- Lincoln County median household income is reported at \$41,189 and average household income is \$55,143.
- Over 24 percent of Caliente's households report incomes less than \$25,000.

Table 4. Percent of Household by Income Level for Lincoln County Communities, 2016.

2016	89001 Alamo	89008 Caliente	89017 Hiko	89042 Panaca	89043 Pioche	Total Lincoln
<b>Total Households</b>	444	548	48	344	482	1,867
<b>Under \$15,000</b>	9.2%	23.9%	8.3%	9.0%	12.2%	14.2%
<b>\$15,000-\$24,999</b>	17.6%	21.5%	16.7%	16.0%	21.8%	19.6%
<b>\$25,000-\$34,999</b>	17.8%	4.4%	18.8%	16.3%	13.1%	12.4%
<b>\$35,000 - \$49,999</b>	12.8%	3.6%	12.5%	11.3%	5.4%	7.9%
<b>\$50,000 - \$74,999</b>	13.7%	23.4%	14.6%	16.0%	5.6%	14.8%
<b>\$75,000 - \$99,999</b>	13.7%	12.8%	14.6%	16.0%	23.2%	16.3%
<b>\$100,000 - \$149,999</b>	10.8%	8.0%	10.7%	11.9%	13.5%	10.9%
<b>\$150,000 - \$199,999</b>	4.1%	2.2%	4.2%	3.2%	5.2%	3.6%
<b>Over \$200,000</b>	0.2%	0.2%	0.0%	0.3%	0.0%	0.2%
<b>Median HH Income</b>	\$40,216	\$35,608	\$41,368	\$45,726	\$42,209	\$41,189
<b>Average HH Income</b>	\$55,885	\$48,808	\$55,737	\$57,568	\$59,897	\$55,143

Source: 2012-2016 American Community Survey 5-year estimates.

Figure 4. Lincoln County Household Income, 2010 & 2016.



## Poverty

“Income-to-poverty ratios represent the ratio of family or unrelated individual income to their appropriate poverty threshold. Ratios below 1.00 indicate that the income for the respective family or unrelated individual is below the official definition of poverty, while a ratio of 1.00 or greater indicates income above the poverty level. A ratio of 1.25, for example, indicates that income was 125 percent above the appropriate poverty threshold” (U.S. Census Bureau, 2004).

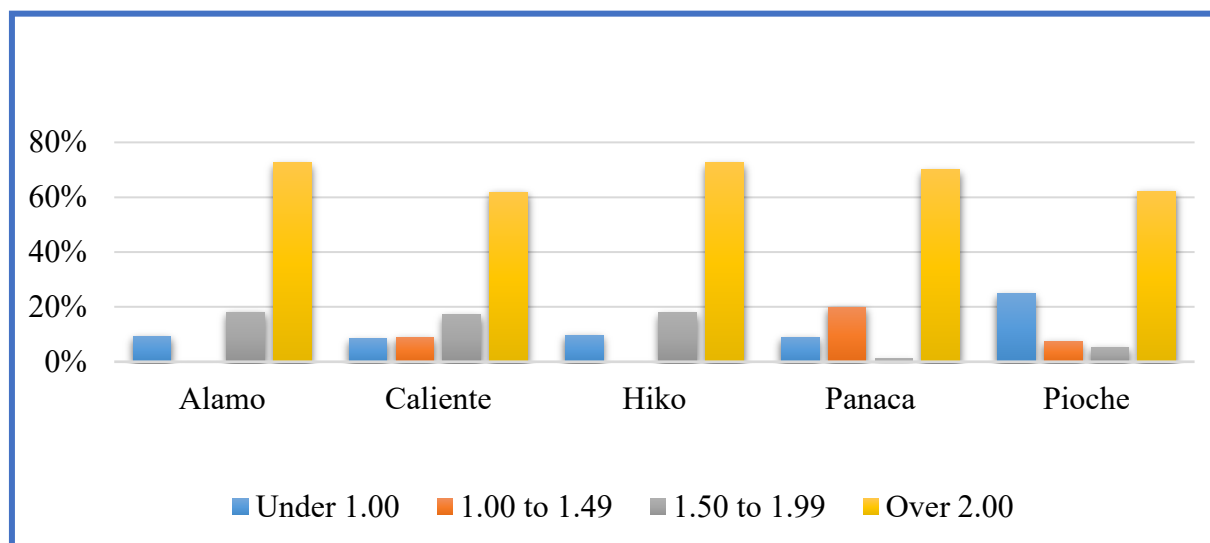
- In 2015, Lincoln County reports the percent of population below the poverty level at 12.7%.
- Pioche has the highest reported below poverty level (under 1.0) at 24.9%. followed by Hiko (9.6%), Alamo (9.3%), Panaca (9.0%) and Caliente (8.3%).

Table 5. Ratio of Income to Poverty Level for Lincoln County Communities, 2015.

Zip Code	Community	Population	Under 1.00	1.00 to 1.49	1.50 to 1.99	Over 2.00
89001	Alamo	1,311	9.3%	0.2%	18.0%	72.5%
89008	Caliente	1,211	8.3%	9.0%	17.1%	61.8%
89017	Hiko	146	9.6%	0.0%	17.8%	72.6%
89042	Panaca	1,173	9.0%	19.9%	1.1%	70.0%
89043	Pioche	977	24.9%	7.5%	5.3%	62.1%

Source: 2012-2016 American Community Survey 5-year estimates.

Figure 5. Lincoln County Poverty, 2010 & 2016.



## Employment

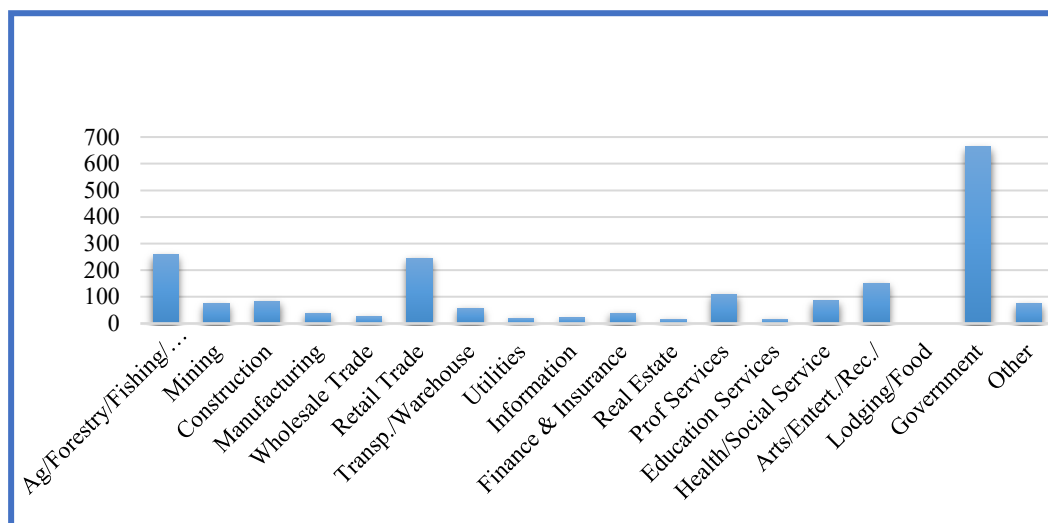
- The top four employment industries are government (33.5%), agriculture (13.0%), retail trade (12.3%), and entertainment, recreation, lodging and food (7.6%).
- Over 78 percent of the government jobs are located in the communities of Panaca and Caliente, while over 72 percent of the retail trade jobs are in Alamo and Caliente.

Table 6. Employment by Industry in Lincoln County Communities, 2016.

2016	89001 Alamo	89008 Caliente	89017 Hiko	89042 Panaca	89043 Pioche	Total Lincoln
<b>Jobs</b>	353	507	133	507	479	1,979
<b>Ag/Forestry/Fishing/Hunting</b>	0	0	0	0	258	258
<b>Mining</b>	0	39	4	32	0	75
<b>Construction</b>	36	0	13	21	13	83
<b>Manufacturing</b>	21	0	0	22	0	39
<b>Wholesale Trade</b>	0	26	0	0	0	26
<b>Retail Trade</b>	101	76	14	24	30	245
<b>Transp./Warehouse</b>	26	21	0	12	0	58
<b>Utilities</b>	0	0	0	20	0	20
<b>Information</b>	0	0	0	0	21	21
<b>Finance &amp; Insurance</b>	11	28	0	0	0	39
<b>Real Estate</b>	11	<10	0	0	<10	16
<b>Prof Services</b>	40	16	0	<10	37	109
<b>Education Services</b>	16	0	0	0	0	16
<b>Health/Social Service</b>	0	36	44	<10	0	86
<b>Arts/Entert./Rec./ Lodging/Food</b>	30	57	31	0	33	151
<b>Government</b>	60	182	0	338	83	663
<b>Other</b>	1	14	27	32		74

Source: 2012-2016 American Community Survey 5-year estimates.

Figure 6. Lincoln County Employment by Sector, 2016.



## Wages

- Lincoln County average wage in 2016 was \$44,138 with the highest averages wages being paid in the government (\$71,187), information (\$69,461) and mining (\$57,002) sectors.
- Panaca reported the highest average wage of \$52,996 followed by Caliente at \$50,677. Each of these communities report strong wages in government, mining and transportation & warehousing.
- Pioche, Alamo and Hiko report average wages significantly lower than the counties overall average wage by \$5,158, \$7,458 and \$20,858 respectively.

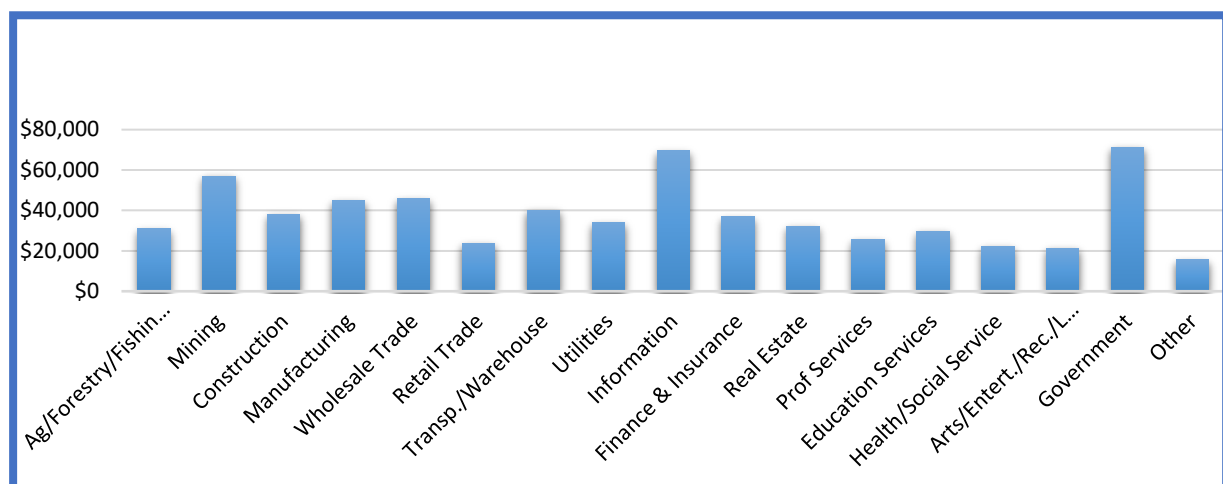
Table 7. Average Wages for Lincoln County Communities, 2016.

2016	89001 Alamo	89008 Caliente	89017 Hiko	89042 Panaca	89043 Pioche	Total Lincoln
<b>Average Wage</b>	\$36,680	\$50,677	23,858	\$52,996	\$38,980	\$44,138
<b>Ag/Forestry/Fishing/Hunting</b>	\$0	\$0	\$0	\$0	\$30,821	\$30,821
<b>Mining</b>	\$0	\$54,737	ID	\$59,194	\$0	\$57,002
<b>Construction</b>	\$45,938	\$0	\$45,297	\$27,173	\$27,881	\$38,185
<b>Manufacturing</b>	\$43,947	\$0	\$0	\$45,897	\$0	\$44,950
<b>Wholesale Trade</b>	\$0	\$45,849	\$0	\$0	\$0	\$45,849
<b>Retail Trade</b>	\$22,756	\$28,655	\$15,627	\$20,597	\$20,000	\$23,636
<b>Transp./Warehouse</b>	\$17,338	\$60,002	\$0	\$54,408	\$0	\$40,186
<b>Utilities</b>	\$0	\$0	\$0	\$33,879	\$0	\$33,879
<b>Information</b>	\$0	\$0	\$0	\$0	\$69,461	\$69,461
<b>Finance &amp; Insurance</b>	\$46,159	\$33,141	\$0	\$0	\$0	\$36,814
<b>Real Estate</b>	\$29,505	ID	\$0	\$0	ID	\$32,239
<b>Prof Services</b>	\$18,378	\$26,012	\$0	ID	\$30,795	\$25,636
<b>Education Services</b>	\$29,613	\$0	\$0	\$0	\$0	\$29,613
<b>Health/Social Service</b>	\$0	\$20,234	\$23,245	ID	\$0	\$22,243
<b>Arts/Entertainment/Recreation/ Lodging/Food</b>	\$23,383	\$18,783	\$21,876	\$0	\$21,970	\$21,263
<b>Government</b>	\$80,016	\$84,028	\$0	\$61,733	\$75,241	\$71,187
<b>Other</b>	ID	\$14,058	\$15,874	\$16,406	ID	\$15,565

\*ID = Insufficient Data

Source: 2012-2016 American Community Survey 5-year estimates.

Figure 7. Lincoln County Average Wages by Sector, 2016.



## **Lincoln County Outdoor Recreation**

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Lincoln County is an attraction for outdoor tourists because it has 98% public lands which includes five state parks, Pahrnagat Wildlife Refuge, and over 9000 of acres of BLM land. Many visitors travel through the county on route between major national parks with Great Basin National Park to the north, Joshua Tree and Death Valley to the west, and Zion, Bryce Canyon and the Grand Canyon to the east. With a variety of interesting places to go in Lincoln County, the state parks in Lincoln County attract 50,000 to 70,000 visitors annually.



The features to visit in Lincoln County include ghost towns, museums, rodeos, wildlife viewing, fishing and hunting, Petroglyphs and pictographs, rock climbing and OHV trails. The Silver State Trail consists of hundreds of miles of trails and trails are being signed from Moapa Valley to Caliente.

New mountain bike trails are being built. As of September, 2018 12 miles of trail on BLM land, 2.5 miles of trail and a skills park in the City of Caliente are available to ride. The BLM will complete their first 17 miles by June 2019 and start on the next 20 miles. Kershaw State Park has started building 17 miles of trails and will complete most of them within a year.

### **2018 Events in Lincoln County**

Over the last several years, Lincoln County has seen an increase in the number of hosted outdoor recreational event increasing, as well as the number of overall visitors. Table 8 summarizes the event dates and estimated attendees for 2018.



Table 8. 2018 Events in Lincoln County.

<b>Date</b>	<b>Event</b>	<b>Location</b>	<b>People Attending</b>
<b>January 14</b>	Ice Golf	Spring Valley State Park	150
<b>February 24</b>	Yucca Chuckers Motorcycle Race	Begins in Caliente	200
<b>May</b>	Drone Event	Alamo	90
<b>March 31</b>	Easter Egg Hunt	Caliente	150
<b>April 13-15</b>	Best in the Desert 200 Motorcycle trail ride	Begins in Caliente	200-300
<b>April 20-21, or May 4-5</b>	Best in the Desert 300 race event	Near Caliente	250-300
<b>April 28</b>	Ground Shakers Motorcycle Race	Panaca to Caliente	200
<b>May 4-6</b>	\$6,000 Fishing Derby	Eagle Valley	200
<b>May 1</b>	Silver State Trail Blazers May Motorcycle Race	Near Caliente	200
<b>May 24-28</b>	Memorial Day Weekend	Caliente	800
<b>June 2</b>	Photography Event	County Wide	45
<b>June 9</b>	Kids Fishing Tournament	Eagle Valley	200
<b>June 8-9</b>	SNORE Truck and Buggy Race	Near Caliente	200
<b>June 16</b>	Gravel Grinder	Beaver Dam	110
<b>July 4</b>	July 4th Celebration	Alamo	400
<b>July 4</b>	July 4th Celebration	Caliente	400
<b>July 21</b>	Pioneer Days	Panaca	300
<b>August 9-12</b>	LC Fair	Panaca	500
<b>August</b>	Silver State Trail Blazers August Motorcycle Race	Near Caliente	200
<b>August 31 to September 3</b>	Labor Day Celebration	Pioche	2500
<b>September</b>	Bushwackers Motorcycle Race	Near Caliente	200
<b>September</b>	Best in the Desert Silver State 150	Near Caliente	200
<b>September 15</b>	Dutch Oven Cook-Off	Cathedral Gorge	150
<b>October 25</b>	Pumpkins in the Park	Kershaw Ryan	50
<b>October 27</b>	Park to Park Pedal	State Parks	250
<b>November 10</b>	Ginger Bread Fun Run	Caliente	150
<b>December 3-24</b>	Cookie Crumb Trail	County Wide	110
<b>Total Participants</b>			<b>8,480</b>

## Room Capacity

Caliente room rental capacity consists of four motels, one vacation home, and one private RV park. In addition, Kershaw Ryan State Park with RV spots and Agua Caliente in transition from a trailer park to a short term rental.

<b>ALAMO:</b> 59 Rooms and 27 RV Spaces
<b>CALIENTE:</b> 68 Motel Rooms; 65 to 67 RV and Camping Spaces (This does not include spaces used in the past by motorized vehicle clubs using spaces near the industrial park)
<b>PANACA:</b> 1 House for 1 group up to 17 People, 1 house 4 rooms and 3 cabins and 24 RV Spaces
<b>PIOCHE:</b> 26 Motel Rooms, 3 Cabins, 15 RV Spaces, 5 Campgrounds

Comparing the room tax figures with capacity shows there is potential to capture 6 to 15% more night stays and income during the peak season with the current infrastructure before reaching the national average of 69.5% (Table 9 below).

Table 9. Calculated Room Capacity in Caliente.

	2016	2017
<b>Rooms &amp; RV Lots in Caliente</b>	101	120
<b>Annual Occupancy Rate</b>	46.3%	28.2%
<b>Difference from 2017 National Average Occupancy of 65.9%</b>	19.6	37.7
<b>Occupancy Rate During Peak Months</b>	59.7%	51.1%
<b>Income that could be captured if Reach Occupancy of National Average 65.9% During Peak Months (Apr – Oct)</b>	\$362,313	\$438,924

## Mountain Bike Visitor Profiles

Mountain bike tourists travel to mountain biking destinations for recreation, family fun, holiday, the challenge, and to escape the city. They usually cycle for a few hours and then eat drink and look

for other entertainment or recreation. Mountain bikers have been surveyed as 80% male between ages of 22 and 40 with average incomes over \$60,000 by IMBA a few years ago. There are increasing numbers of females. Our small survey in 2018 indicated older riders with 64% being 38 to 53, 18% being 54 to 72 and only 18% being 22 to 37. Early discussions in local



mountain biking groups are leaning to targeting mountain biking families and van vacationers to fit with the Las Vegas and Utah family visitors, local priority of family and the gap in services for van vacationers.

## Common Community Impacts, Studies of Other Communities

<b>FRUITA:</b> 1,000K of trails equals \$50 million @ 4-day stay
<b>WHISTLER:</b> Average stay of 3.3 days @ \$40 million (bike)
<b>CROSBY, MN:</b> Opened 25 miles of trail in 2011. 25,000 cyclists/year ride the trails, adding an estimated \$2 million to the local economy and 15 new businesses by young people.

The International Mountain Bike Association estimates Caliente may draw 7,000 to 8,000 people per year with 40 miles of trails considering their experience of impacts on similar trail systems and communities.

## Business Needs to Support MTB Trail Users

Research by the Lincoln County Regional Development Authority reveals the most common business needs to service mountain bike visitors to include (in no particular order).

Table 10. Most Common Business Needs to Service Mountain Bike Visitors.

<b>Lodging, Bike Secure Storage, and Bike Placement</b>	<b>Bike Sales, Rentals (High-end Demo Bikes), Parts and Repairs</b>
<b>Camping</b>	<b>Cabins</b>
<b>Alternate Entertainment</b>	<b>Professional Guided Tour</b>
<b>Live Music</b>	<b>Brew Pubs</b>
<b>Rider-friendly Eating</b>	<b>Meal Catering and Box Meals</b>
<b>Rider-friendly Drinking (Hoppy Craft Beers)</b>	<b>Mountain Bike Riding Lessons and Training</b>
<b>Shuttles to and from Las Vegas Area</b>	<b>Shuttles from Caliente to Trail-heads</b>
<b>Hot Springs Swimming</b>	<b>Rock Climbing</b>
<b>Hiking</b>	<b>Fishing</b>
<b>MTB Washing Stations</b>	<b>Horseback Riding</b>
<b>Childcare</b>	<b>Pet Care</b>
<b>ATV Riding and Tours</b>	<b>Massage and Therapy</b>
<b>BBQs</b>	<b>Dances</b>

## Survey Results of Visiting Mountain Bikers in June and July, 2018

The following pages show a series of survey data gathered from 28 surveys representing 96 persons whom visited the Lincoln County mountain biking trails in June and July, 2018. These results should give a balanced description of what mountain biking visitors spent in terms of time and money and what these individuals have in mind for desired location and community features.

The word cloud surveys perhaps illustrate best the individual desires from communities they would visit. Among these terms are *food* and *services*, which indicate, if anything, a market need and an opportunity for exchange.

- *Age of Visiting Mountain Bikers in June and July 2018* (Page 18)
- *Survey Results of Visiting Mountain Bikers in June and July 2018* (Page 18)
- *Expected Expenditures per Group* (Page 18)
- *Word Cloud Surveys* (Page 19)



Figure 8. Age of Visiting Mountain Bikers in June and July 2018.

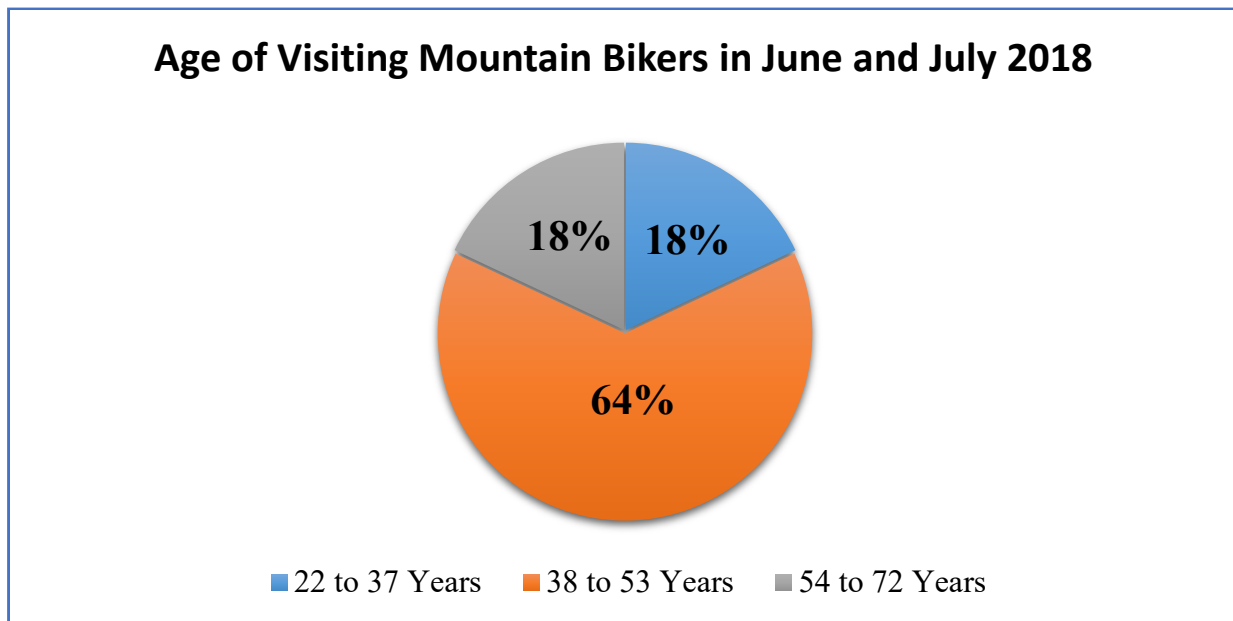


Table 11. Survey Results of Visiting Mountain Bikers in June and July 2018.

<b>Average Miles Traveled</b>	160
<b>Average Nights Stayed</b>	1.5
<b>Average Trips per Year</b>	2.7

Table 12. Expected Expenditures per Group

	<b>Per Day</b>	<b>Per Trip</b>
<b>Groceries</b>	\$32.43	\$36.61
<b>Restaurants</b>	\$27.86	\$29.29
<b>Gas</b>	\$40.89	\$42.68
<b>Repairs</b>	\$3.21	\$6.79
<b>Entertainment</b>	\$2.58	\$2.50
<b>Lodging</b>	\$13.04	\$13.04
<b>Shopping</b>	\$9.81	\$9.46
<b>Event Fees</b>	\$23.21	\$23.21
<b>Bike Rental</b>	\$1.43	\$1.43
<b>Average</b>	\$17.16	\$18.33

When asked about desired location factors, the visitors mentioned the words *close*, *trails*, and *scenery* the most often.



When asked about desired community factors, the visitors mentioned the words *friendly*, *food*, and *services* the most often.

## **Conceptual Economic Impact Model**

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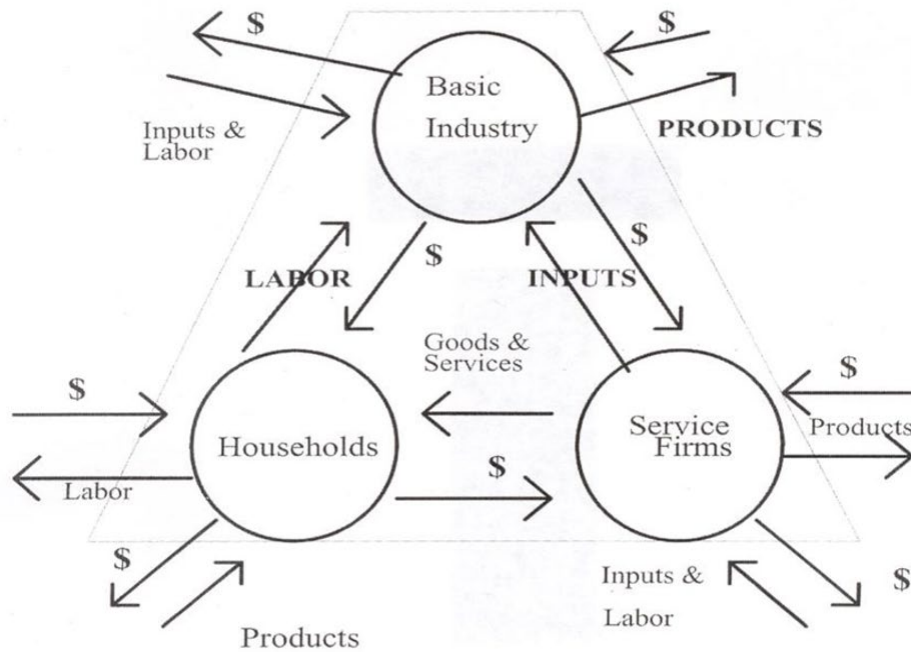
The most common methodology used for estimating the impacts of positive or negative economic shocks to an economy is Input-Output (I-O) analysis. I-O models offer a snapshot of an economy, detailing the sales and purchases of goods and services between all sectors in a defined economy (i.e. sub-county, county, state, or region). The transactions between sectors are measured in terms of dollars and segmented into two broad categories: non-basic, which includes transactions between local industries, households and other institutions, and basic, which includes transactions between industries, households, and other institutions outside the economic being modeled (i.e. imports and exports).

Figure 9 on the next page illustrates the major dollar flows of goods and services in any economy. The foundation of a state's economy is those businesses, which sell some or all of their goods and services to buyers outside the state. Such a business is a basic industry. The flow of products out of, and dollars into, a state is represented by the two arrows in the upper right portion of Figure 9. To produce these goods and services for "export" outside the state, the basic industry purchases inputs from outside of the state (upper left portion of Figure 9), labor from the residents or "households" of the state (left side of Figure 9), and inputs from service industries located within the state (right side of Figure 9). The flow of labor, goods, and services in the state is completed by households using their earnings to purchase goods and services from the state's service industries (bottom of Figure 9). It is evident from the interrelationships illustrated in Figure 9 that a change in any one segment of a state's economy will have reverberations throughout the entire economic system of the state.

For the purposes of this study, a Lincoln County input-output model was developed using the IMPLAN platform. The Lincoln county economic impact model was updated to reflect the current levels of output/sales, personal income and employment by economic sector. This model is then used to estimate the economic impacts generated throughout the entire county from a change in economic activity, i.e. increased outdoor recreation activity.



Figure 9. Overview of an Economy



## Economic Impact Analyses

### 1.0 Mountain Bike Trails Visitor Expenditures

The growth of a region's economy is dependent on new industry start-ups and the expansion and relocation of existing companies. Economic growth is driven by increases in industry and customer purchases, largely as a result of industry exports, increase in wages, or increase in visitors. Economists measure the changes to a region's economy, as a result of these forces, in terms of economic



and employment impacts. The Caliente area mountain bike trails are expected to increase visitation to Caliente, resulting in increased expenditures at tourism-related industries. This analysis estimates average daily visitor expenditures by type and applies the IMPLAN input-output model to estimate the resulting economic and employment impacts.

Economic impacts resulting from mountain bike recreation is not well documented. Capturing visitor totals and trip expenditures is a complicated process that requires significant resources and monies to survey participants. Five studies that conducted surveys related to recreational bicycling were identified and reviewed:

- Jackson Hole Trails Project Economic Impact Study, University of Wyoming, May 2011
- The Economic Impact from Bicycling in CO, University of Colorado at Denver, 1999
- Sea to Sky Mountain Biking Economic Impact Study, Western Canada Mountain Bike Tourism Association, 2006
- The Economic Significance of Bicycle-Related Travel in Oregon, Dean Runyan Associates, 2012
- Economic and Fiscal Impact Analysis of the Vermont Trails and Greenway Council Member Organizations, Camoin Associates, October 2016

Of the five studies, only one solely focuses on economic impacts resulting from mountain bike trails (Sea to Sky Mountain Biking Economic Impact Study). However, within the Economic and Fiscal Impact Analysis of the Vermont Trails the majority of activity on trails maintained by the Kingdom Trails Association (KTA) is mountain biking outside of the winter season, and visitor budget surveys for KTA trails were conducted during the mountain bike season. Due to more current surveys, comparatively large sample size, and differences in currency values between Canada and US, the resulting average daily expenditures from non-locals using trails maintained by the Kingdom Trails Association is used to estimate the economic impacts of visitors traveling to Caliente for mountain biking on the area trails.

It should be noted that local resident expenditures are not included in economic impact results. This is because local households have finite budgets and generally do not increase spending due to new industry or activity in the region.

The Economic and Fiscal Impact Analysis of the Vermont Trails estimated that each non-local, overnight visitor spent \$117.00 per day while recreating on trails maintained by the Kingdom Trails Association (KTA), in 2016 dollars. Before applying the estimated expenditures to Caliente visitors using area trails, the accommodation expenditure was adjusted using the average overnight rate as reported by Caliente lodging establishments (as calculated by Cooperative Extension; June 2018). The average room rate reported for lodging in the region maintained by KTA is \$42.23 (assumes double occupancy), whereas the average rate reported by lodging establishments in the Caliente region is \$31.00 (excludes RV facilities). After adjusting lodging expenditures, the average daily expenditure estimated for Caliente overnight visitors is \$105.77. Lodging and food are the highest expenditures for overnight visitors to the KTA-maintained trails.

The Economic and Fiscal Impact Analysis of the Vermont Trails also estimated that each non-local, day visitor spent \$115.00 per day while recreating on trails maintained by the Kingdom Trails Association (KTA), in 2016 dollars. Food is also the highest expenditure for day visitors to KTA-maintained trails, followed by recreation/fees and equipment purchases.

Within the Sea to Sky Mountain Biking Economic Impact Study, significant portion of daily visitor budgets was allocated towards bike shop expenditures for bike rentals (\$59.82). The Canada study also found a significant difference in bike shop expenditures between day and overnight visitors, indicating that the majority of overnight visitors bring their own mountain bikes. Day visitor expenditures for equipment purchases are also higher than overnight visitors in the Vermont study, which possibly points to the same conclusion.

Table 13 provides the breakdown of average daily expenditures by type of spending for non-local users of the Vermont trails maintained by Kingdom Trails Association. These expenditure estimates will be used to determine potential economic impact of mountain biking tourism in Caliente, Nevada.

Table 13. Average Daily Expenditures Estimated for Caliente Visitors

<b>Average Expenditures Per Person, Per Day for Trail Visitors<sup>1</sup></b>		
<b>Spend Category</b>	<b>Same-day</b>	<b>Overnight</b>
<b>Equipment</b>	\$19.28	\$11.34
<b>Food Stores</b>	\$18.94	\$13.43
<b>Bars &amp; Restaurants</b>	\$28.61	\$20.49
<b>Commercial Lodging<sup>2</sup></b>		\$31.00
<b>Recreation/Fees</b>	\$19.61	\$11.07
<b>Shopping</b>	\$7.28	\$5.64
<b>Vehicle Exp.</b>	\$21.28	\$12.79
<b>Total</b>	<b>\$115.00</b>	<b>\$105.77</b>

1. Analysis of non-resident spending attributed to trails maintained by Kingdom Trails Association (VT), with the majority of uses being mountain biking.
2. Based on an average lodging rate of \$62 (as reported by Caliente establishments, excluding RV parks): assumes double occupancy.

Participation rates are also important for understanding visitor purchasing behaviors and economic activity from tourism. Not every overnight visitor uses commercial lodging and bike shop owners need to estimate equipment and bike rental inventories. Discussion of spending behaviors outside of budget estimates are not provided by the Vermont study for the Kingdom Trails Association. For insight on visitor participation the Sea to Sky Mountain Biking Economic Impact Study for Whistler, Canada is used. The 2006 study focuses solely on mountain biking and includes discussion of bike rentals and lodging choices.

The Sea to Sky study reports more than one out of four respondents rent mountain bikes and two-thirds stay in commercial lodging. Only six-percent reported staying in RV/campgrounds while mountain biking in Whistler, however. Due to differences and climate and the relative short distance to pull/drive a RV from Las Vegas, it is assumed that RV/campground participation will be much higher for Caliente visitors. The desert southwest and its plethora of public lands for off road recreation is highly suitable for RV and camping participation. Participation rates from the Whistler study.

- Bike Rentals 27%
- Commercial Lodging 67%
- RV/Camping 6%

Length of stay for non-locals drive cumulative spending amounts and affect total economic impact. The average length of stay for non-locals that use trails maintained by the Kingdom Trails Association (KTA) in Vermont is 2.8 days. There are over 100 miles of KTA-maintained trails, whereas the Caliente area trails will open at a fraction of that length. Until future construction of trails in the Caliente region can expand the variety and offerings, in addition to “higher-end” amenities to fulfill non-mountain biking activities, initial years of mountain bike tourism is expected to result in slightly less average length of stay for Caliente visitors.

## 2.0 Tourism-Related Establishments in Caliente

As documented in the visitor expenditure table, industries related to tourism include lodging, food stores, bars and restaurants, entertainment, retail, and gas stations/mechanics. Retail industries associated with tourism is further broken down into health and personal care (drug stores), apparel, sporting goods, and general merchandise (gift stores).

An analysis of existing tourism-associated establishments in Caliente shows that nearly all industries exist to support tourism spending, excluding sporting goods and apparel stores (Table 15). For visitors traveling to Caliente for mountain bike recreation, sporting goods and apparel are important industry gaps. Many sporting goods stores sell significant amount of apparel, thus the gap could be addressed with one establishment. The remaining industry with limited presence in Caliente is arts, entertainment, and recreation, with recreation provided by Ryan State Park and the mountain bike trails. Arts and entertainment offerings in Caliente are non-existent outside gaming activities and, therefore, represent additional industry gaps.



Table 14. Caliente Tourism-Related Establishments

Industry	# of Caliente Establishments	Establishments
<b>Motels</b>	5	Caliente Cottage/Caliente Hot Springs/Midway Motel/Rainbow Motel/Shady Motel
<b>Bars &amp; Restaurants</b>	4	J&J Fast Food/Knotty Pine Restaurant & Bar/Shamrock Bar/Side Track
<b>Auto Repair/Parts/Tires</b>	3	CARS/Getting' It Garage/The Spare Tire
<b>RV Parks &amp; Camps</b>	3	Agua Caliente RV Park/ Young's RV Park/Ryan State Park
<b>General Merchandise</b>	2	Lincoln True Value/GG's/Family Dollar
<b>Arts, Entertain., &amp; Recreation</b>	2	Kershaw Ryan State Park/Caliente Hot Springs
<b>Food &amp; Bev. Stores</b>	1	Great Basin Foods
<b>Health &amp; Pers. Care Stores</b>	1	Jolly's Drug Store
<b>Gas Stations</b>	1	Jerry's Sinclair
<b>Sporting Goods</b>	0	

In order to determine if additional gaps exist between existing Caliente establishments and residents, taxable sales revenues were compared to average household spending by commodity as calculated by Bureau of Labor Statistics (BLS). Nationwide surveys of household expenditures are conducted by BLS and annual results are provided by geographic region, household income, household composition, educational attainment, occupation, race, age, etc. Because household spending is most impacted by income, the consumer expenditure survey by income range was used to compare average household spending with reported revenues in Caliente.

According to the latest American Community Survey (2016; US Census Bureau), the average household income in Caliente is \$62,155. As a result, the income range used for average household expenditures by commodity as surveyed by BLS is \$50,000 to \$69,999. The income range represents almost 17 million households in the US as of 2016. The annual average expenditure by commodity reported per household is then applied to the number of households in Caliente (393; 2016 American Community Survey) to calculate total expenditures by commodity. The commodities are then aggregated to match total spending with visitor-associated industries (i.e., general merchandise). Table 16 details average household expenditures estimated for Caliente.

Table 15. Estimated Caliente Household Expenditures by Tourism-Related Establishment

<b>Income before Taxes: Annual Expenditure Means</b>		
<b>Item</b>	<b>\$50,000 to \$69,999<sup>1</sup></b>	<b>Caliente Households</b>
<b>Number of consumer units</b>	16,846,000	393 <sup>2</sup>
Income before taxes	\$59,369	\$62,155 <sup>3</sup>
<b>Average annual expenditures</b>	<b>\$52,088</b>	
	<b>Per Household</b>	<b>Caliente Estimates</b>
<b>Food &amp; Bev. Stores</b>	\$4,313	\$1,695,009
Food at home	\$3,893	\$1,529,949
Alcoholic Beverages	\$420	\$165,060
<b>Bars &amp; Restaurants</b>	\$2,847	\$1,118,871
<b>General Merchandise</b>	\$4,542	\$1,785,006
Housekeeping supplies	\$620	\$243,660
Household furnishings and equipment	\$1,628	\$639,804
Audio and visual equipment and services	\$1,096	\$430,728
Pets, toys, hobbies, and playground equipment	\$730	\$286,890
Reading	\$100	\$39,300
Tobacco products and smoking supplies	\$368	\$144,624
<b>Apparel &amp; Accessories</b>	\$1,622	\$637,446
<b>Gas Stations</b>	\$2,069	\$813,117
<b>Auto Repair/Parts/Tires</b>	\$910	\$357,630
<b>Health &amp; Pers. Care Stores</b>	\$1,214	\$477,102
Drugs	\$464	\$182,352
Medical Supplies	\$137	\$53,841
Personal care products and services	\$613	\$240,909

1. *Surveyed US Households with income before taxes equal to \$50,000 to \$69,000*

2. *2016 American Community Survey, US Census Bureau*

3. *Average Household Income, 2016 American Community Survey, US Census Bureau*

Business revenues for Caliente establishments are ascertained through taxable sales reporting to Department of Taxation and shared with the Center for Regional Studies per special user agreement. Taxable sales reporting, however, does not include revenues generated from service-based industries. As a result, business revenues are unknown for lodging; auto repair; RV parks and



campgrounds; and arts, entertainment, and recreation industries. For the retail-based industries, business revenue reporting shows that significant gaps did not exist between revenues by industry in 2016 and average household expenditures estimated for Caliente.

For many retail industries the comparison of average household expenditures for incomes between \$50,000 and \$69,999 and actual sales reported by Caliente retail establishments indicates that the selected retail industries fulfill the demand from Caliente household spending. However, the analysis highlights the lack of important retail industries in Caliente associated with outdoor recreation and mountain biking, including sporting goods and apparel industries. As a result, considerable leakage of local dollars to adjacent economies is shown to exist for selected retail industries in Caliente, industries that are also important for outside recreation and tourism. It should be noted that the consumer expenditure survey does not report estimates for lodging; arts, entertainment, and recreation; and sporting goods expenditures.

The conclusions from comparing resident and visitor spending with existing tourism-associated industries and actual business revenues include:

- Sporting goods and apparel stores and arts and entertainment establishments do not exist in Caliente, but are targets of spending by tourists and locals;
- Remaining retail industries in Caliente report annual revenues that are similar to estimated expenditures made by US households in same income range as average household income in Caliente;
- An increase in household wages and/or tourism will provide demand for additional retail and service offerings.

### **3.0 Potential Spending by Visitors to Caliente Mountain Bike Trails**

The potential spending by visitors to the mountain bike trails can be derived by applying the visitor expenditure estimates in Table 13. However, because there are no bike shops, sporting goods, entertainment, apparel, or tourism-focused shopping establishments in Caliente, average daily expenditures for those industries are excluded. After excluding the non-existent industries, the average daily expenditures are reduced to \$88.95 for overnight visitors and \$68.83 for day visitors.

The demand for additional retail and service offerings created by visitors to area mountain bike trails is highlighted by the lack of industries reported by visitor expenditure estimates in Table 13. Using the expenditure estimates, the potential daily spending from overnight visitors is \$117.00 per visitor, and \$115.00 for day visitors. Thus, the potential spending “loss” resulting from lack of tourism-based industries is \$28.05 per day for overnight visitors and \$46.17 per day for day visitors. A significant portion of the potential spending loss is a result of equipment purchases at bike shops, which can easily cross-over into sporting goods and apparel sales that are popular with outdoor tourism.

It is impossible to forecast the number of visitors that will visit Caliente for its mountain bike trails. The over miles of trails maintained by Kingdom Trails Association in Vermont draws an estimated 94,000 users per year. The Economic and Fiscal Impact Analysis of the Vermont Trails found that 75 percent of the users were non-locals in 2016, for a total of 70,263 non-local trail users. An unknown portion of users on KTA-maintained trails are Nordic skiing enthusiast, however.

For the more limited length and use of Caliente mountain bike trails, if there are a thousand visitor-days, the annual spending potential for existing businesses becomes \$88,950 if all overnight visitors, or \$68,830 if all day visitors. At this amount of annual visitor-days, existing industries would enjoy a small increase in their revenues, but new businesses could not survive on the spending amount without cannibalizing from existing businesses.

If visitor-days increased to 10,000 per year in Caliente, the spending potential for existing businesses would reach \$889,500 if all overnight visitors, or \$688,300 if all day visitors. At this amount of new spending, new businesses could be successful. The 10,000 visitor-days per year amounts to 27 visitors in Caliente per day on average. Of course, tourism is seasonal, thus new businesses initiated by the increase in visitors would need to be prepared for weeks, and possibly months, of limited revenues.

Moreover, if additional tourism-based industries are added to Caliente to fulfill the potential expenditures for bike shop services and rentals, entertainment, and shopping as reported in Table 13, the annual amount of expenditures made by 10,000 visitors to Caliente mountain bike trails could reach \$1,170,000 if all overnight visitors, and \$1,150,000 if all day visitors.

## 4.0 Economic Impacts of Visitation to Caliente Mountain Bike Trails

Economic impacts are calculated by applying estimated overnight and daily visitor expenditures, for 10,000 visitors, to the 2016 IMPLAN input-output model. The IMPLAN model was first checked for accurate industry and employment representation and edited where needed by University Center for Economic Development.

The IMPLAN model is built around quantifying the interaction between industries and industry sub-sectors within an economy. The model is based on the theory that when new money enters a community through investments, revenue or income, some of it is re-spent one or more times in the regional economy, creating additional impacts. Data in the IMPLAN database is based on the Bureau of Economic Analyses (BEA) Covered Employment and Wages (CEW) program (formerly known as the ES202 program), the County Business Pattern data provided by the US Census Bureau, and the Regional Economic Information System data provided by the BEA. The IMPLAN model database also draws from secondary economic data at the county level from a variety of public sources.

Both economic and employment impact results are separated into direct, indirect, and induced impacts and are mathematically summarized using multipliers. The definitions related to the economic impacts are provided below.

**Economic Impact:** The increase in potential productivity in the regional economy based on the expenditures from the project. Each component of the project (operating expenditures and visitor expenditures) generates economic impacts that can be combined to show the total economic impact of the project.

**Employment:** Represents the total number of people employed by the project as well as the jobs created or supported in the regional economy to support the project's economic activity.

<b>Multipliers:</b>	Multipliers are predicated upon a domino theory of economic change. They translate the consequences of change in one sub-sector upon others in other industries. Multipliers are estimators of the “ripple effect.”
<b>Direct Economic Impact:</b>	Represents the expenditure amounts from the project that directly impact the regional economy. The direct impact of operating expenses represents the current operating expenses necessary for the project to operate the separate business sections; and the direct impact of employment represents the employment level directly associated with the project.
<b>Indirect Economic Impact:</b>	Represents the impact from the project’s purchases of goods and services from supplying vendors. Purchases made by supplying vendors to restock their inventory by purchasing goods and services from other vendors who in turn restock by purchasing from other vendors and so on is the indirect impact. These purchases are also commonly referred to as the “ripple effect.”
<b>Induced Economic Impact:</b>	The direct activity and the resulting indirect activity generate some increases in the general level of employment and income in the study area, leading to a tertiary level of economic impact through the higher level of household expenditures on goods and services. These impacts reflect the increase in spending from the household sector as income increases or decreases due to changes in production of goods and services.

As is the case with Caliente’s industry mix, economic impact analyses expose weaknesses in areas with small amount of industries that force purchases outside the study region. Communities with large amount of consumer leakage are reflected with low multipliers (below 1.25) that represent the amount of local recirculation of new dollars. In addition to leakage, economic impacts are muted by industries that sell commodities manufactured outside the region. Tourism-associated industries are top-heavy with retail establishments that import almost everything they sell. Unless the study area also manufactures the retail commodities, the majority

of the purchases are allocated to industries outside the study area, further contributing to leakage of dollars. In this case, the resulting economic impact for retail industries is only the price mark-up (“margins”) on the retail commodities. This is the reason for the difference between actual expenditures and direct impact amounts shown in economic impact results.

After excluding estimated expenditures for industries that do not exist in Caliente (bike shops, entertainment, and shopping), resulting economic impacts from 10,000 visitors to Caliente mountain bike trails are reported in Table 17.

Table 16. Comparison of Economic Impacts on Existing Caliente Businesses from 10,000 Mountain Bike Visitor Days – Overnight v. Day Visitors.

x 10,000	Daily Expenditure	OUTPUT IMPACTS			
		Direct Impact	Indirect Impact	Induced Impact	Total Impact
<b>Overnight Visitors</b>	\$889,457	\$682,947	\$48,021	\$707	\$731,675
<b>Day Visitors</b>	\$688,333	\$286,111	\$10,908	\$388	\$297,407

\*Impacts from overnight and day visitors are not additive

After running daily expenditures through the economic input-output model, the differences between overnight and day visitor impacts become more pronounced. This is directly related to the greater share of day visitor expenditures allocated to retail industries but no lodging industry. As a result, visitor spending provides greater levels of economic benefit to communities when stay overnight.

The breakdown of overnight and day visitors that will travel to Caliente for mountain bike trails is unknown. The breakdown for visitors to mountain bike trails maintained by Kingdom Trails Association in Vermont is 78 percent overnight visitors and 22 percent day visitors, and will be used to estimate the economic impact to Caliente from 10,000 visitor days.

Upon applying the 78/22 percent ratios of overnight to day visitors, the total economic impact potential for existing businesses in Caliente is \$636,136 per year (10,000 visitor days) if visitor breakdowns and budgets are similar to trail users surveyed by Kingdom Trails Association in Vermont (Table 18).

Table 17. Total Economic Impact on Existing Caliente Businesses from 10,000 Mountain Bike Visitor Days.

		OUTPUT IMPACTS			
x 10,000	% of Annual Visitors <sup>1</sup>	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Overnight Visitors	78%	\$532,699	\$37,456	\$552	\$570,707
Day Visitors	22%	\$62,944	\$2,400	\$85	\$65,430
Annual Visitation		<b>\$595,643</b>	<b>\$39,856</b>	<b>\$637</b>	<b>\$636,136</b>
		MULTIPLIERS			
Visitors		1.0000	0.0669	0.0011	1.0680

1. Analysis of non-resident use of trails maintained by Kingdom Trails Association (VT), with the majority of uses being mountain biking.

Indirect impacts are a result of secondary spending by industries restocking supplies and purchasing services as a result of the spending by visitors. The indirect impacts are better explained by the multiplier of 0.0669 which estimates that for every \$1.00 spent by mountain bike trail visitors in Caliente, another \$0.07 is recirculated in the Caliente economy through secondary spending by associated industries. The indirect impact results are relatively low due to the lack of industries in the region, causing expenditures to quickly leak out of the region.

Induced impacts are a result of new wage spending by households employed by industries impacted by the visitor spending. The induced impact multiplier of 0.0011 estimates that for every \$1.00 spent by mountain bike trail visitors in Caliente, another \$0.001 is recirculated in the Caliente economy through spending by households. The induced impact results are also low due to the lack of industries in the region, in addition to the relatively low amount of expenditures that then trickle down to wages.

The total economic impact multiplier of 1.0680 estimates that for every \$1.00 spent by mountain bike trail visitors in Caliente, another \$0.07 is recirculated in the Caliente economy through secondary spending by associated industries and new wage spending by households.

## 4.1 Employment Impacts of Visitation to Caliente Mountain Bike Trails

The IMPLAN industry input-output model also estimates impacts on employment in a study area based on an economic change. Table 19 estimates the impacts on employment resulting from potential spending by 10,000 mountain bike trail visitor days in Caliente. Again, the ratios between overnight and day visitors (78%/22%) for trails maintained by the Kingdom Trails Association in Vermont is used.

Table 18. New Employment Created by 10,000 Mountain Bike Visitor Days.

		EMPLOYMENT IMPACTS			
x 10,000	% of Annual Visitors <sup>1</sup>	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Overnight Visitors	78%	7.848	0.327	0.005	8.181
Day Visitors	22%	1.154	0.020	0.001	1.175
Annual Visitation		9.002	0.347	0.006	9.356
		MULTIPLIERS			
Visitors		1.0000	0.0386	0.0007	1.0393

1. Analysis of non-resident use of trails maintained by Kingdom Trails Association (VT), with the majority of uses being mountain biking.

The potential for additional employment in Caliente based on an annual total of 10,000 visitor days of spending at existing industries is nine full-time jobs if visitor breakdowns and budgets are similar to trail users surveyed by Kingdom Trails Association in Vermont. Of course, the industries that are the most impacted by potential job growth are the industries that receive the direct expenditures.

## 5.0 Additional Economic Impacts from Missing Tourism-Related Industries

As reported in Table 15, there are key industries related to tourism that do not currently exist in Caliente. As shown in survey results conducted for mountain bike tourism in Vermont and Whistler, Canada, expenditures at bike shops made by visitors can be significant, especially if bike rentals are offered. Visitors also report spending on entertainment and shopping as part of their travels, two industries that are limited to a hardware store (True Value), a dollar store (Family Dollar), and no-



fee outdoor recreation.

Outdoor tourism industries that do not exist in Caliente (sporting goods, shopping, and entertainment) show higher daily expenditures for day visitors (\$46.17) than overnight visitors (\$28.05), according to the Vermont study. Thus, the addition of these missing industries could hedge against relatively low economic impacts derived from day visitors. Although the daily expenditure amounts may seem small, the spending becomes significant when the volume of visitors reaches critical mass. Table 20 summarizes the potential of additional economic impacts if key tourism industries are opened in Caliente, based on 10,000 visitor days per year.

Table 19. Loss of Economic Impacts Due to Industry Gaps – Overnight v. Day Visitors

x 10,000	Daily Expenditure	OUTPUT IMPACTS			
		Direct Impact	Indirect Impact	Induced Impact	Total Impact
<b>Overnight Visitors</b>	\$280,543	\$167,945	\$10,078	\$5,885	\$183,908
<b>Day Visitors</b>	\$461,667	\$292,217	\$17,486	\$10,327	\$320,030

*\*Impacts from overnight and day visitors are not additive.*

Again, because the breakdown of future overnight and day visitation to Caliente mountain bike trails is unknown, the ratio used in the 2016 Vermont study is used to estimate the total economic impact of industries not currently located in Caliente based on 10,000 visitor days (27 per day) (Table 21).

Table 20. Total Economic Impact Loss from 10,000 Mountain Bike Visitor Days Due to Industry Gaps.

x 10,000	% of Annual Visitors <sup>1</sup>	OUTPUT IMPACTS			
		Direct Impact	Indirect Impact	Induced Impact	Total Impact
<b>Overnight Visitors</b>	<b>78%</b>	<b>\$130,997</b>	<b>\$7,861</b>	<b>\$4,591</b>	<b>\$143,448</b>
<b>Day Visitors</b>	<b>22%</b>	<b>\$64,228</b>	<b>\$3,847</b>	<b>\$2,272</b>	<b>\$70,407</b>
<b>Annual Visitation</b>		<b>\$195,285</b>	<b>\$11,708</b>	<b>\$6,863</b>	<b>\$213,855</b>
		MULTIPLIERS			
<b>Visitors</b>		1.0000	0.0600	0.0351	1.0951

1. Analysis of non-resident use of trails maintained by Kingdom Trails Association (VT), with the majority of uses being mountain biking.

The loss of total economic impact as a result of tourism-related industry gaps in Caliente is estimated at \$213,855 per year, based on 10,000 visitor days. The tourism-related industries not located in Caliente also report a higher multiplier than existing tourism-related industries. Although the difference is \$0.027, a million dollars of transactions leverages an additional \$27,000 of secondary spending within Caliente.

## 5.1 Additional Employment Impacts from Missing Tourism-Related Industries

With additional expenditures and economic impacts comes additional jobs. The input-output model estimates that another 3.4 full-time jobs in missing tourism-related industries would be supported in Caliente by 10,000 overnight visitor days per year, based on ratios of overnight and days visitors reported in the Vermont study (Table 22).

Table 21. Additional Employment Impact of Missing Industries from 10,000 Mountain Bike Visitor Days.

x 10,000	% of Annual Visitors <sup>1</sup>	OUTPUT IMPACTS			
		Direct Impact	Indirect Impact	Induced Impact	Total Impact
Overnight Visitors	78%	2.175	0.077	0.045	2.297
Day Visitors	22%	1.060	0.038	0.022	1.120
Annual Visitation		3.235	0.115	0.067	3.417
		MULTIPLIERS			
Visitors		1.0000	0.0355	0.0206	1.0561

1. Analysis of non-resident use of trails maintained by Kingdom Trails Association (VT), with the majority of uses being mountain biking.

## 6.0 Total Economic Impact Potential from Visitation to Caliente Mountain Bike Trails

The total economic impact potential of mountain bike tourism in Caliente is estimated by combining the impacts on existing businesses with potential impacts on missing industries. If the community of Caliente added key industries that provided bike rentals and equipment, entertainment, and tourism-related shopping, and if the Caliente mountain bike trails can attract 10,000 visitors per year (27 per day), the Caliente economy stands to gain almost \$850,000 per year

(Table 23). The total economic impact potential also assumes that one in five visitors will spend the day, whereas the remaining visitors (four out of five) will stay overnight.

Table 22. Total Economic Impact Potential to Caliente from 10,000 Mountain Bike Visitor Days

		OUTPUT IMPACTS			
x 10,000	% of Annual Visitors <sup>1</sup>	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Overnight Visitors	78%	\$663,696	\$45,317	\$5,142	\$714,155
Day Visitors	22%	\$127,232	\$6,247	\$2,357	\$135,836
Annual Visitation		\$790,928	\$51,564	\$7,500	\$849,991
		MULTIPLIERS			
Visitors		1.0000	0.0652	0.0095	1.0747

1. Analysis of non-resident use of trails maintained by Kingdom Trails Association (VT), with the majority of uses being mountain biking.

## 6.1 Total New Employment Potential from Visitation to Caliente Mountain Bike Trails

The total new employment potential of mountain bike tourism in Caliente is estimated by combining the new employment generated by spending at existing businesses with new employment generated by potential spending at missing industries. Again, assuming that Caliente adds key tourism-related industries and the trails generate 10,000 visitor days in a year, almost 13 new full-time jobs would be created (Table 24).

Table 23. Total New Employment Potential to Caliente from 10,000 Mountain Bike Visitor Days

		EMPLOYMENT IMPACTS			
x 10,000	% of Annual Visitors <sup>1</sup>	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Overnight Visitors	78%	10.024	0.404	0.050	10.478
Day Visitors	22%	2.214	0.058	0.023	2.294
Annual Visitation		12.237	0.462	0.073	12.772
		MULTIPLIERS			
Visitors		1.0000	0.0378	0.0060	1.0437

1. Analysis of non-resident use of trails maintained by Kingdom Trails Association (VT), with the majority of uses being mountain biking.

## **Conclusions and Discussion**

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The purpose of this study is to assess the business opportunities and impact in Lincoln County from the development and operation of a new Mountain Biking trails operation originating from Caliente, Nevada. This comes at a time when Lincoln County continues to be challenged with establishing sustainable economic development projects that enhance the economic vitality and quality of life for residents. The fact that approximately 98 percent of all lands in Lincoln County are publically owned encourages federal, state and local government and leaders to work together to identify and develop successful economic development projects.

Over the years, Lincoln County is slowly establishing itself as an outdoor recreation destination. Lincoln County is estimated to attract nearly 8,500 visitors to various events throughout the year ranging from motocross to competition cook-offs and 50,000 to the state parks annually. With the county's natural beauty, five state parks, and ongoing development of outdoor recreational amenities, the addition of 50 miles of Mountain Biking Trails originating from Caliente can further put Lincoln County on the map as a true outdoor recreation destination. Leaders and enthusiasts working on the mountain biking trails are estimating that the number of visitors will conservatively increase by 8,000 annually. Increasing the amount of outdoor recreation visitors, with the greatest potential impact on the City of Caliente, has now shifted the focus from constructing the trails to how Lincoln County, and specifically the City of Caliente, best serve the visitors through retail and service businesses.

Since mountain biking tourism is relatively new to Lincoln County, understanding the spending habits requires collecting data from already established mountain biking destinations. Five operations were identified resulting in establishing an average daily spending per person of \$115 for day visitors and \$105.77 for overnight visitors. This equates to an estimated impact of \$636,136 in income and 9 jobs by 10,000 mountain biking visitors for the current businesses in Caliente. However, Lincoln County and specifically Caliente, is challenged to capture the direct expenditures because of the lack of tourism related establishments that mountain biking visitors frequent during their visits. If additional sporting goods, shopping and entertainment businesses were made available, the potential income would increase by an additional \$213,855 and 3 jobs for 10,000 visitors. Given the current economic linkages and structure in Lincoln County means most of the

inventory and supplies for the businesses must be purchased from outside the county, the overall impact is minimal by generating approximately an additional \$0.09 for every dollar spent in Lincoln County. Aiming to use local supplies and services would increase further benefit to the county and provide a home grown flair. Although the current total impact that will be generated by outdoor recreation is modest, the opportunities are great. Through local planning and entrepreneurship training and/or counseling, Lincoln County can begin to develop and foster new businesses that cater and meet outdoor recreation visitor needs, as well as offering more choices and amenities for existing residents.

### **Next Possible Steps:**

It is highly recommended that communities in Lincoln County continue to plan and build a basis to capture potential impact that mountain biking tourism and overall outdoor recreation has on the county. Some preliminary action steps to get started may include:

- Establish or strengthen a countywide outdoor recreation tourism that can coordinate and monitor sustainable development. (Committee?)
- Develop and administer a universal outdoor recreational questionnaire that should be offered throughout the year. This can be coordinated and directed by a committee.
- Engage outdoor recreation visitors and make them part of the planning process. However, remember this is your community!
- Working with University of Nevada Cooperative Extension (UNCE) and Small Business Development Center (SBDC) to develop and deliver entrepreneurship classes and counseling to begin to develop and support existing and new local businesses.
- Annually assess industry and how it is benefiting the overall vision and economic sustainability of Lincoln County.