

# TRUCKEE TAHOE AIRPORT

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## Economic Impact Study

August 22, 2018

***Project Team:***

David Zehnder, Managing Principal  
David Schwartz, Executive Vice President  
Catherine Hansford, Hansford Consulting



*The Economics of Land Use*

O a k l a n d

S a c r a m e n t o

D e n v e r

L o s A n g e l e s

730 17th Street, Suite 630 § Denver, CO 80202  
303.623.3557 § [www.epsys.com](http://www.epsys.com)

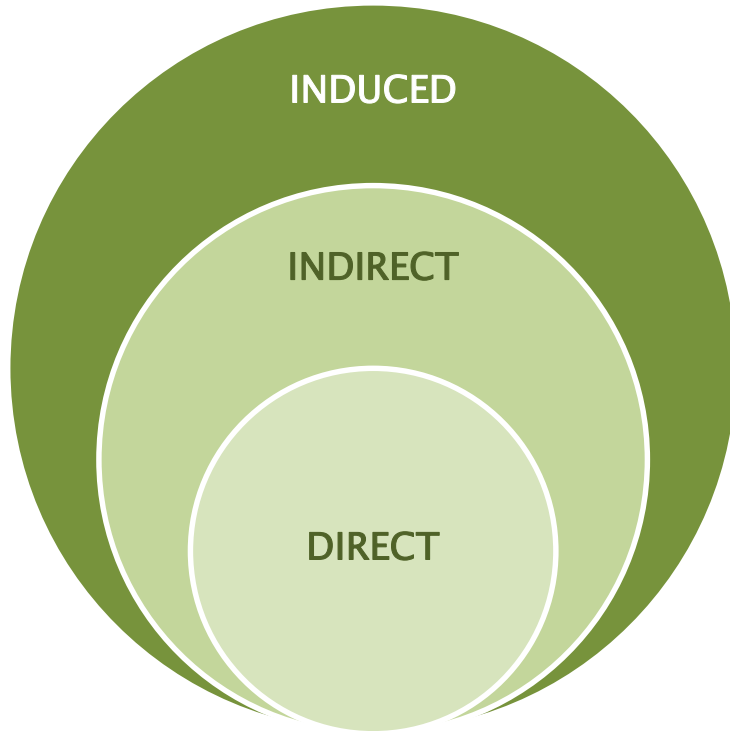
# PRESENTATION CONTENT

- Economic Impact Terminology
- Secondary Data Sources
- Primary Data Sources
- Enplanements Survey
- Business Survey
- Overview of Impacts
- Multiplier Effect
- District Context



# ECONOMIC IMPACTS

## IMPACT TERMINOLOGY



**INDUCED IMPACTS:** the jobs, wages, output, and value-added generated by expenditures made by households of the direct and indirect industry jobs

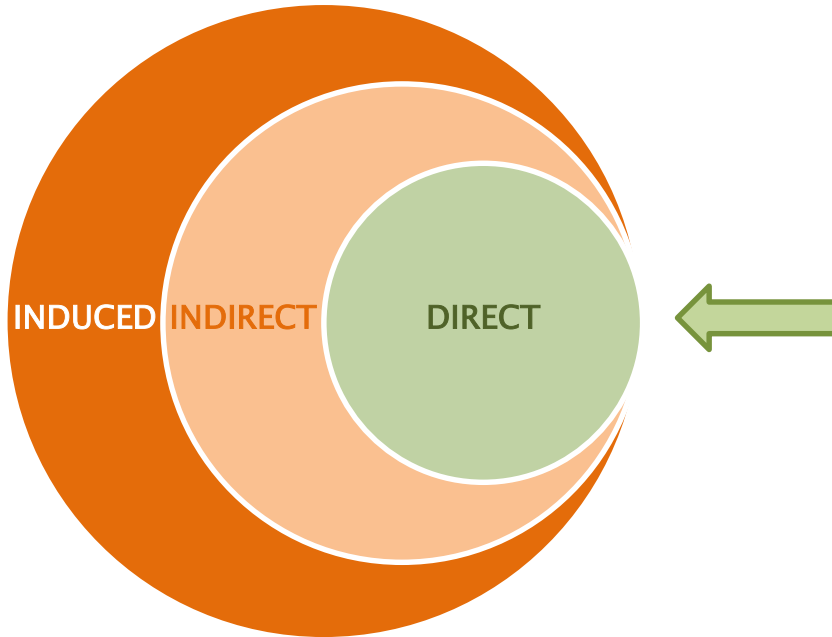
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**DIRECT IMPACTS:** economic activities carried out by a specific industry – i.e. jobs, wages, output, value-added

# ECONOMIC IMPACTS

## DEMAND FACTORS

### “Downstream” Economic Activity



### “Upstream” Economic Activity

#### Demand Factors

- Housing developments (2<sup>nd</sup> homeowners)
- Lodging industry development
- Ski industry growth
- Increased marketing success
- GRP increases (i.e. growth in disposable income for high net-worth households)
- Alternative transportation system capacity

# SECONDARY DATA

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JOBS AND SPENDING

# DATA SOURCES

## SECONDARY DATA

### Context Metrics

- Employment
- Retail Spending
- Accommodations Spending
- Property Valuation
- Airport Operations

### “Upstream” Context

- Major Development Plans
- Transportation Network Capacity

### Wage & Salary Jobs (BLS)

- 17,500
- \$2.1 billion in output

### Retail Spending (CDTFA)

- \$306 million

### Accommodations Spending (CDTFA)

- \$245 million

### Property Valuation Spending (Assessors)

- \$19.5 billion

### Airport Operations

- \$11.2 million
- 41,300 revenue passengers (2017)

### Major Development Plans

- 2,600 housing units
- 1,300 TAUs

### Transportation Network

- 87% VOC (current)
- 96% VOC (2035 w/ imps)

# PRIMARY DATA

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SURVEYS

# SURVEYS

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## COMPONENTS

### Online survey

- Full list of questions (32)
- Permission granted from and coordinated through representatives of charter services
- Fielded in September/October 2017
- 319 responses

### Intercept survey

- Shorter list of questions (24)
- Fielded in July/August 2017
- 202 responses

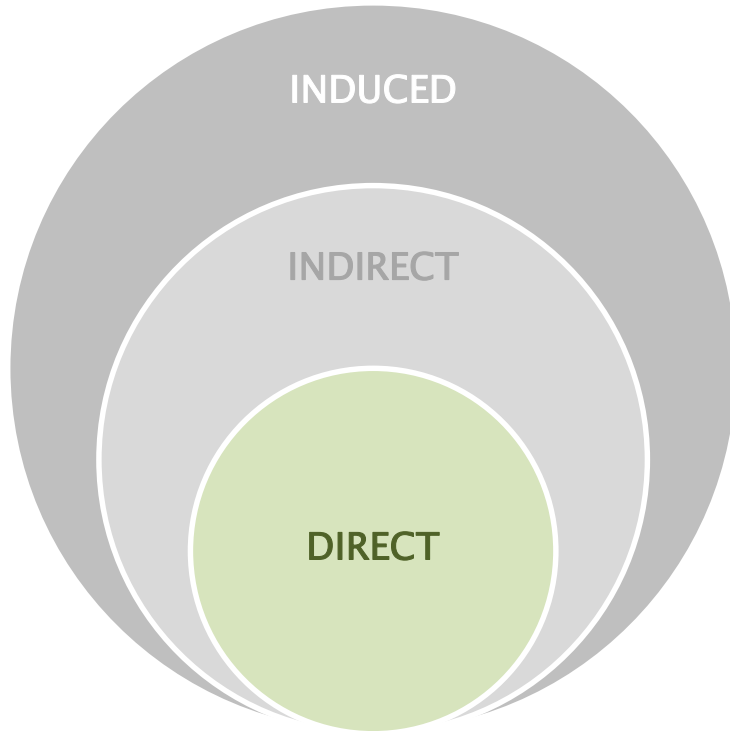
### Merged data

- 521 responses
- Removed erroneous/anomalous entries (e.g. expenditure data missing, drove to Truckee, live in Truckee, flew into another airport, incredible response entries, etc.)
- 437 cleaned (zip code and city alignment, took midpoint of ranges given, interpreted responses as to # visits per year, etc.)



# ECONOMIC IMPACTS

## ENPLANEMENTS SURVEY DATA



INDUCED IMPACTS

INDIRECT IMPACTS

**DIRECT ACTIVITIES:** in addition to the operation of the airport, visitor spending is included as a “direct” activity, because it is a demand-driver for the economy that brings in “new” dollars

# ENPLANEMENT SURVEY

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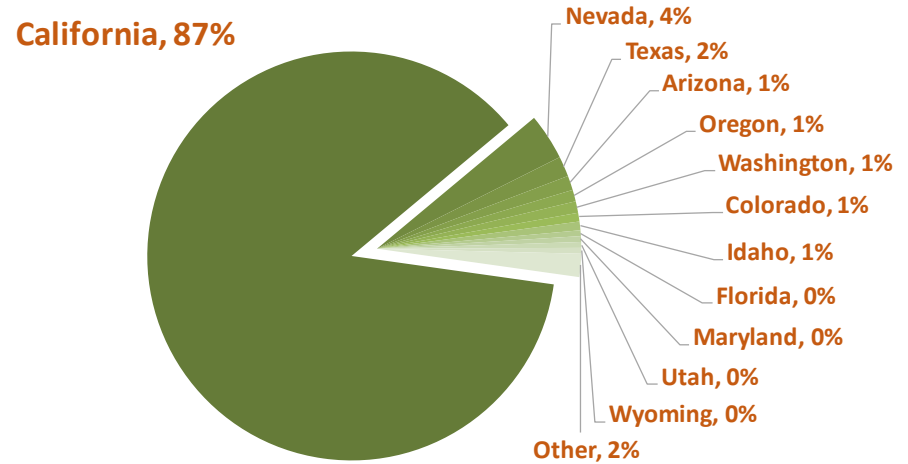
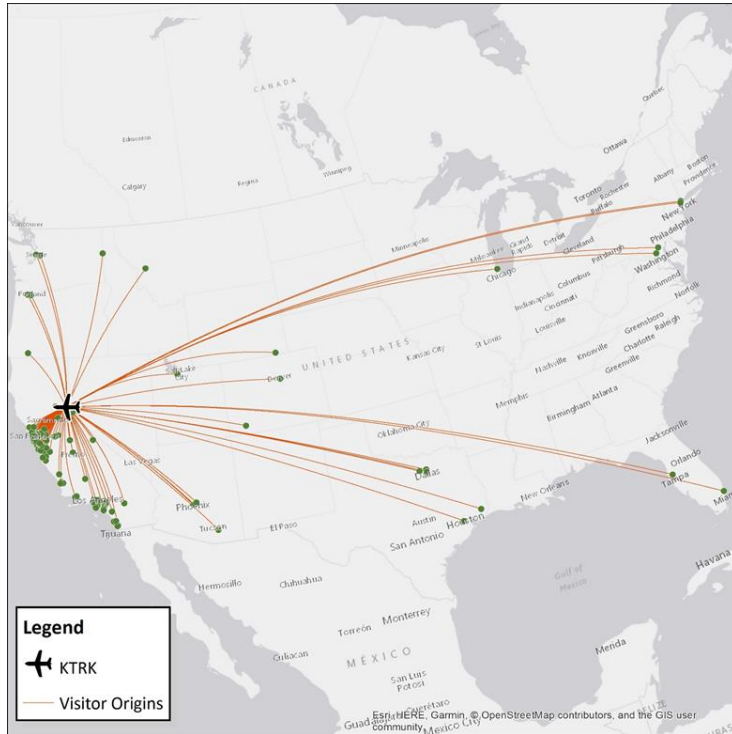
## BASIC TRIP CHARACTERISTICS

### Questions

- **What is your home zip (postal) code?**
- After arriving at the Truckee Tahoe Airport, where did (will) you spend a majority of your time?
- How many nights did (will) you stay?
- What was the main purpose of your trip?
- During what month did you arrive on this recent trip?
- In total, how many passengers (including yourself) were on your flight into the Truckee Tahoe Airport?
- In your travel party, how many people were with you (including yourself)...

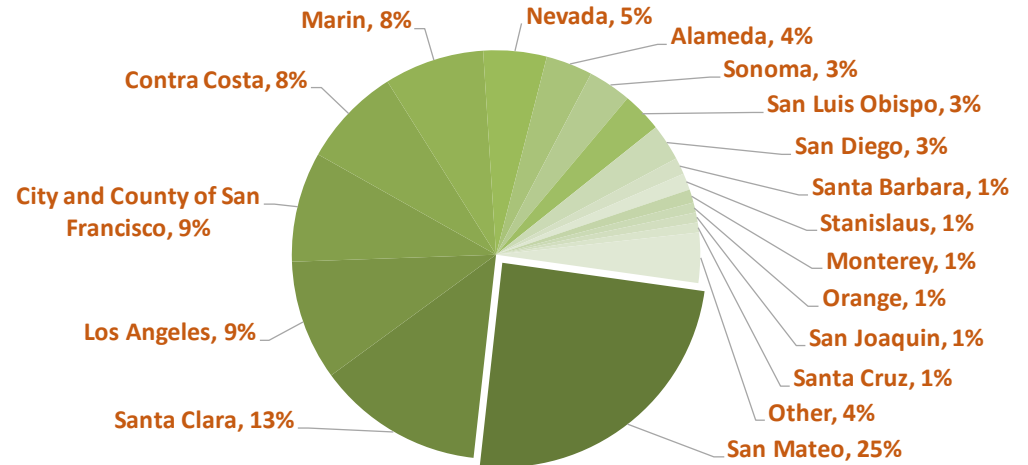
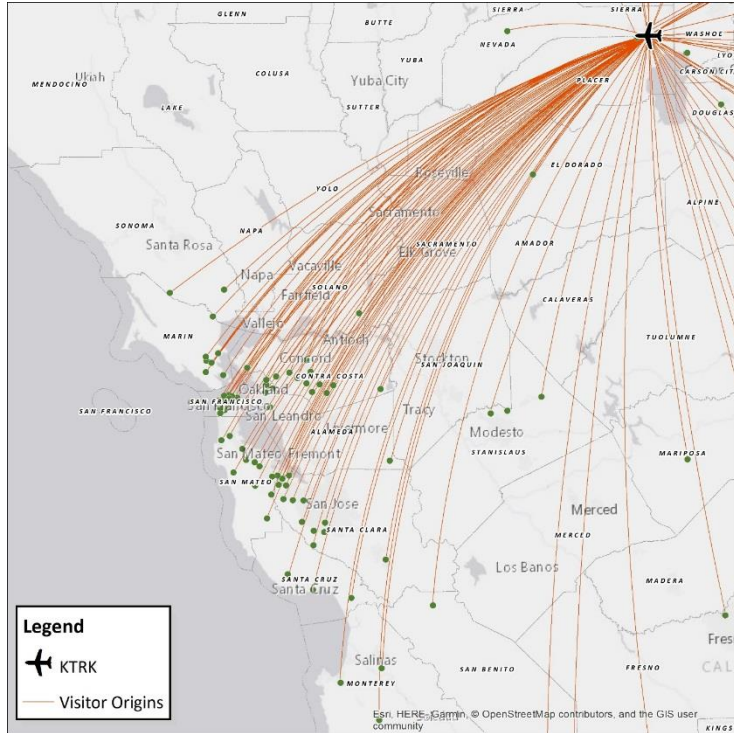
# VISITOR ORIGINS

## NATIONALLY



# VISITOR ORIGINS

## REGIONALLY

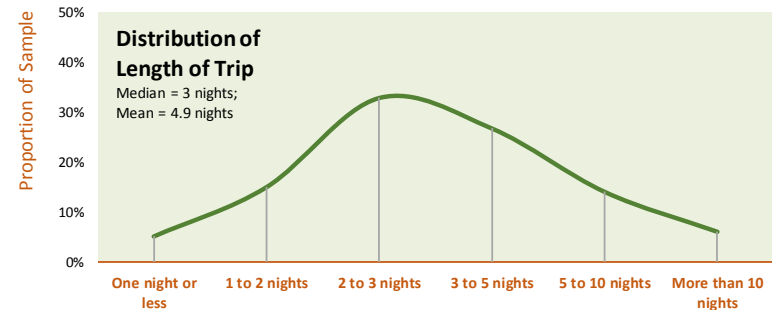
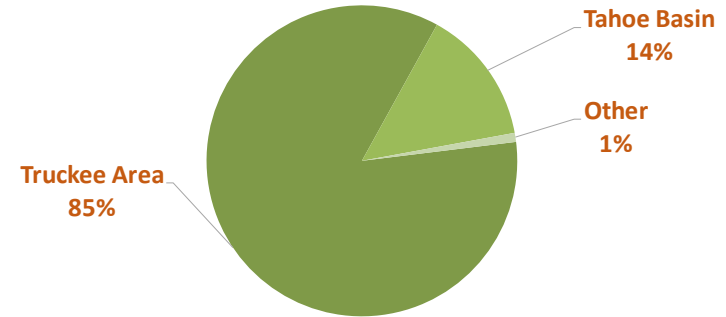


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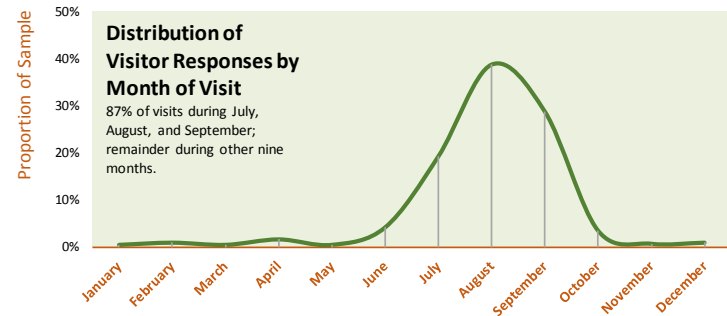
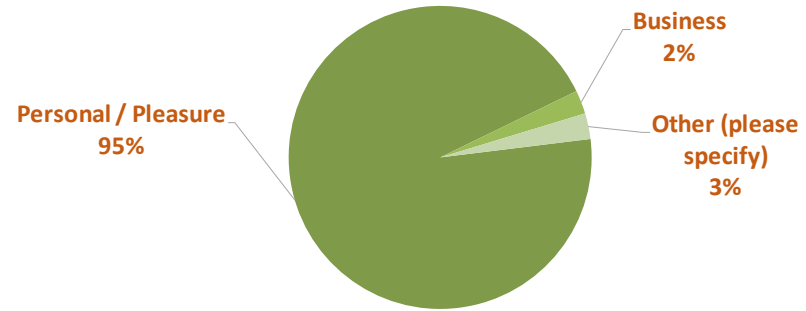


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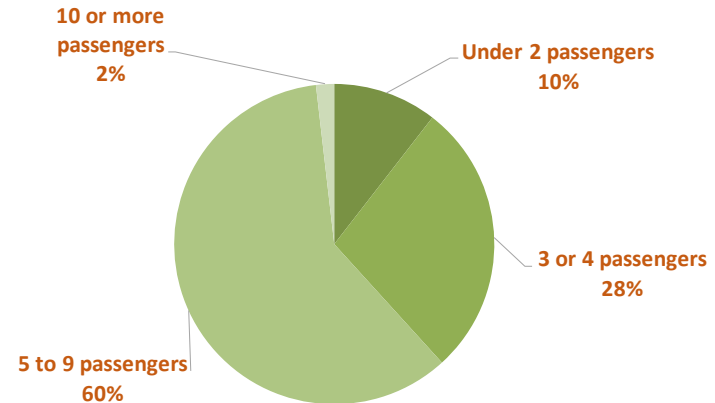
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### Distribution of Visitors by Aircraft Capacity

<u>Passenger Capacity</u>	<u>Aircraft Equivalents</u>
Under 2 passengers	Piston
3 or 4 passengers	Piston Twin, Turboprop, Jet 2 (< 12.5k)
5 to 9 passengers	Jet 3 (12.5 - 20k), Jet 4 (20 - 50k)
10 or more passengers	Jet 5 (50k+)

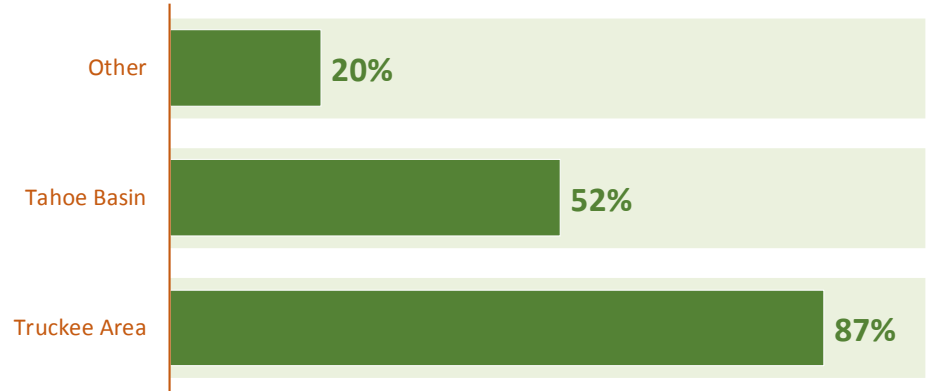


# ENPLANEMENT SURVEY

## ACCOMMODATIONS

### Questions

- **Do you own a vacation home (or fractional ownership unit) in the Truckee / Tahoe region?**
  - Where is your vacation home (or fractional ownership unit) located?
- What type of accommodation did you stay in during your trip?
- **If you stayed at a hotel, motel, resort or similar accommodation, how many rooms did you book?**
  - What was your average nightly room rate?



### ACCOMMODATIONS

- 19% of visitor in paid lodging
- 4.9 average nights per trip
- 19,000 total room-nights
- Average of \$379 / night



# ENPLANEMENTS SURVEY

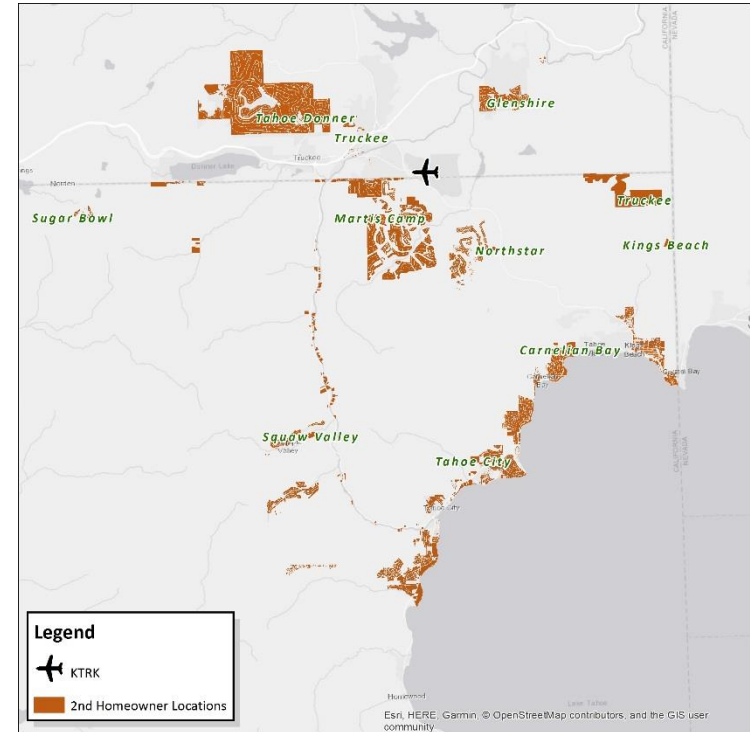
## EXTRAPOLATION OF VACATION HOMEOWNERSHIP

### Taxable Property Valuation

- \$19.5 billion in District
- \$18.5 billion is residential

### Estimated Vacation Homeownership

- ~1,100 vacation homes
- Based on Assessor average taxable values
- \$1.6 billion in taxable residential value
- 8.7% of District



# ENPLANEMENT SURVEY

## DAILY EXPENDITURES

### Estimates on an Individual or Travel Party basis

- Food & Beverage
- Shopping & Retail
- Entertainment

### F&B Spending

- \$51 per person per day
- \$10.4 million total

### Retail Spending

- \$31 per person per day
- \$6.2 million total

### Entertainment Spending

- \$43 per person per day
- \$8.6 million total

# ENPLANEMENT SURVEY

## DEMAND CHARACTERISTICS

### Questions

- How likely would you be to travel to the area if the Truckee Tahoe Airport were not here?
- If the Truckee Tahoe Airport were not here, how likely would you be to use Reno or Sacramento and drive to your destination?
- Would you use the South Lake Tahoe Airport and drive?

### Likelihood

- 36% very unlikely
- 15% somewhat unlikely

### Likelihood

- 46% very unlikely
- 13% somewhat unlikely

### Likelihood

- 76% very unlikely
- 8% somewhat unlikely

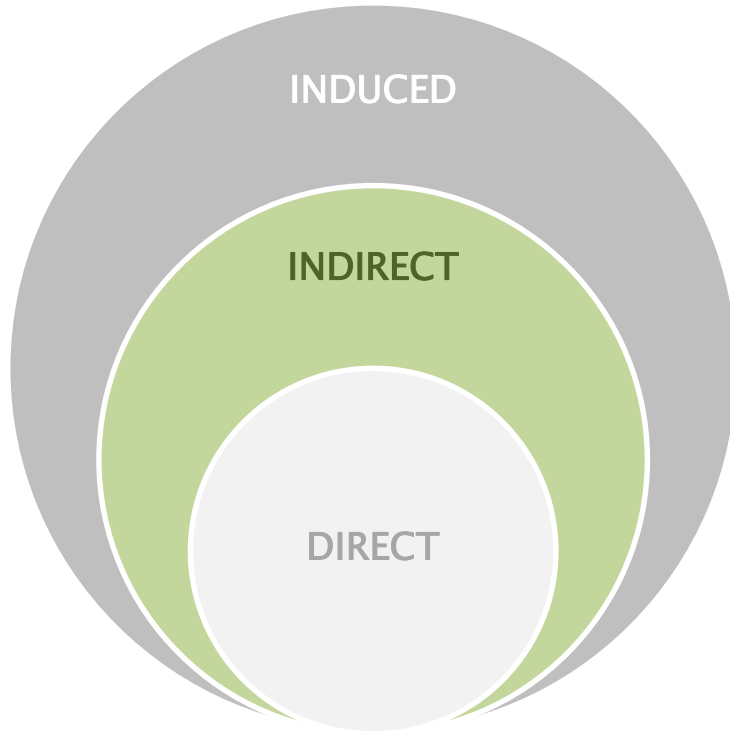
### Socioeconomic characteristics

- Your age range
- Your annual household income

- Approx. ½ were age 45 to 54 years
- Nearly 90% at HH incomes +\$500K

# ECONOMIC IMPACTS

## BUSINESS SURVEY DATA



### INDUCED IMPACTS

**INDIRECT ACTIVITIES:** businesses operating in proximity to the airport are a portion of the “business-to-business” impacts generated by the airport; they are not, however, 100% of those impacts – thus, they are illustrative

### DIRECT ACTIVITIES

# BUSINESS SURVEY

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## OPERATIONAL

### Questions

- What does the business do?
- How many years in operation?
- How long located near airport?
- How many jobs at this location (FT/PT both high- and low-season)?
- How many jobs in another location (FT/PT both high- and low-season)?
- What were total revenues last year?
- What was your operating budget last year?
- What portion was payroll?
- What portion was land lease/rent/mortgage?
- What portion was reserves?
- What portion of operating budget goes to local taxes? Ex. Prop, sales, use

# BUSINESS SURVEY

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## OPERATIONAL

### Questions

- Who is your customer?
- What is the % of workers that live in the area/region (vs. commuters)?
- What portion of your demand for services do you think stems from the airport?
- If the airport were no longer operating, what portion of your business do you think you would lose?
- How many employees would you have to let go?
- Would you stay in business?
- Would have to move or relocate outside of region (0=no; 1=yes)

# BUSINESS SURVEY

## INDIRECT BUSINESS DEPENDENCY

### Responses

- 42 businesses
- 364 FT and PT jobs
- 2.1% of TTAD jobs

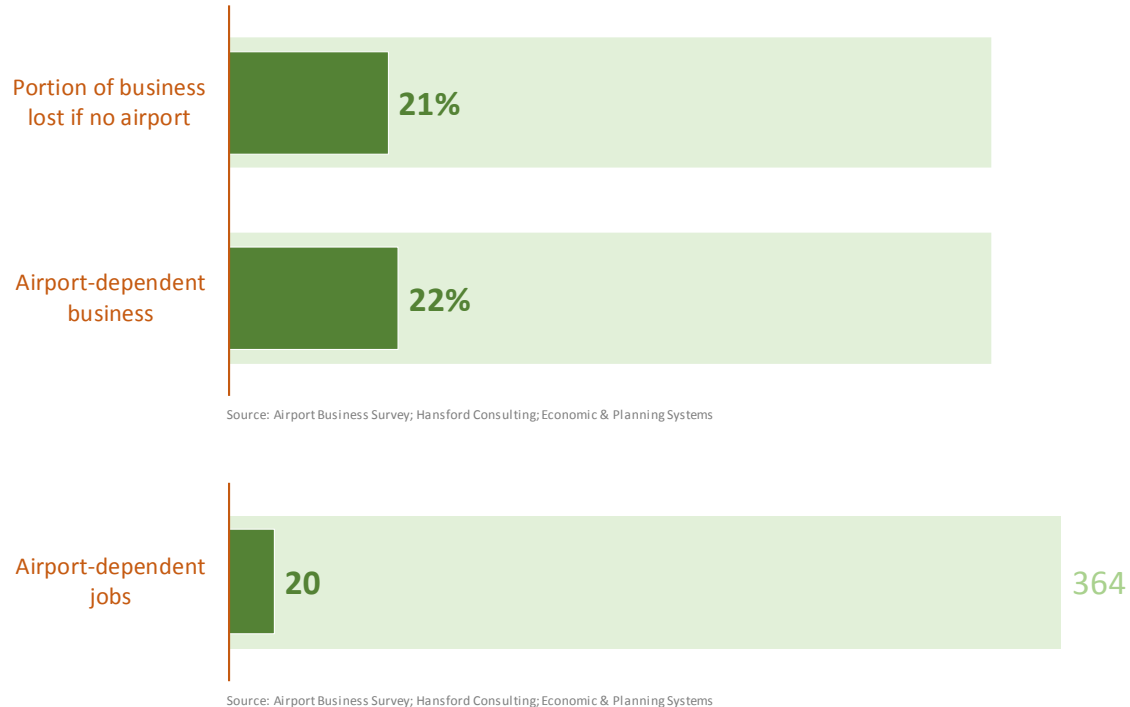
### Top Industries

- Construction (33% of total)
- Retail (14%)
- Transportation/Warehousing (9%)
- Accommodations/Food Service (9%)
- Administration & Support (7%)



# BUSINESS IMPACTS

## QUANTIFICATION OF AIRPORT DEPENDENCY



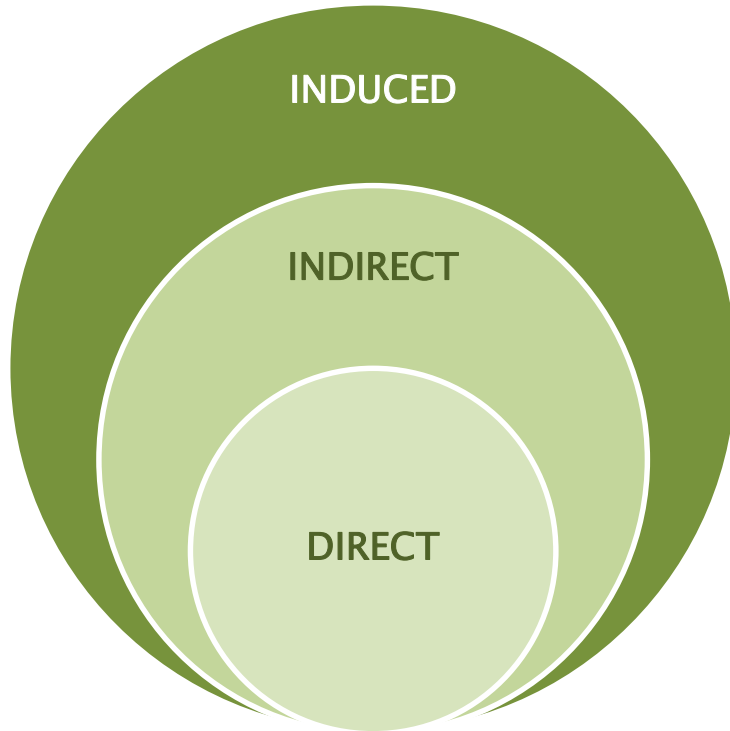


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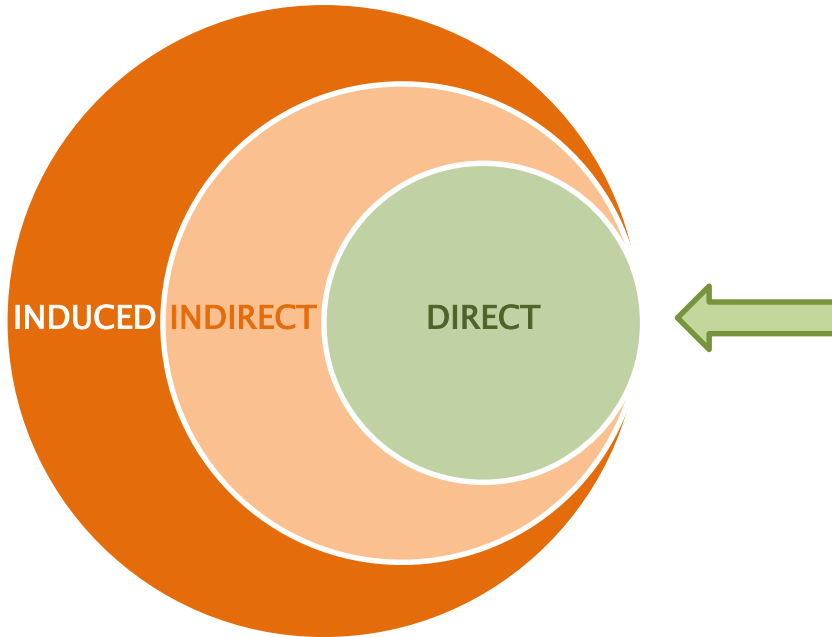
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# LAND USE CONSIDERATIONS

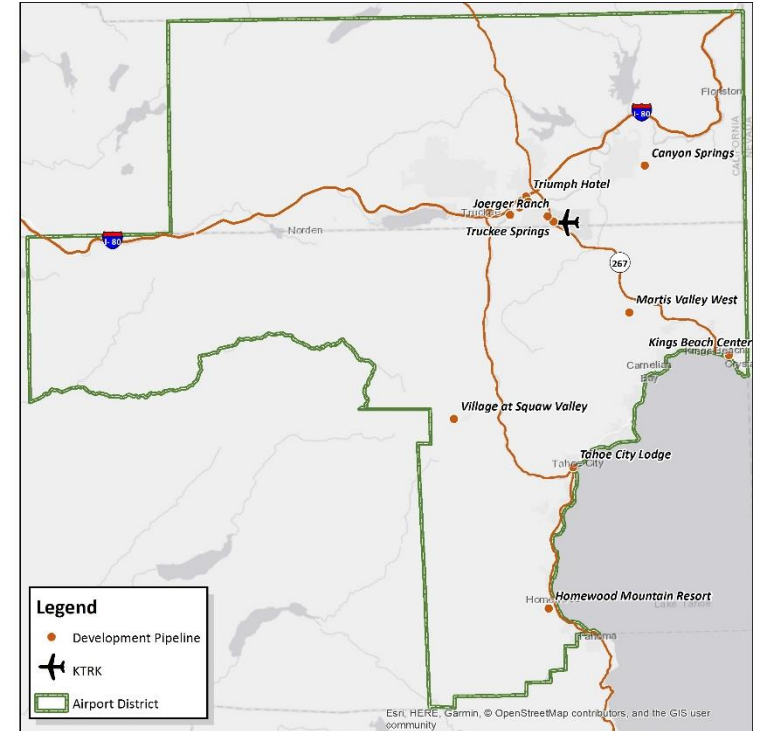
## MAJOR LAND USE DEVELOPMENT PLANS

### Residential Developments

- 2,600 housing units
- 85% are market-rate
- Many at resorts; will be almost entirely 2<sup>nd</sup> homeowners
- i.e. 81% 2<sup>nd</sup> homeownership rate suggests strong linkage

### Non-Residential Developments

- 1,300 tourist accommodation units (TAU)
- 2/3 are condo-hotel units
- 1.4 million SQFT of office, commercial, industrial



# TRANSPORTATION NETWORK

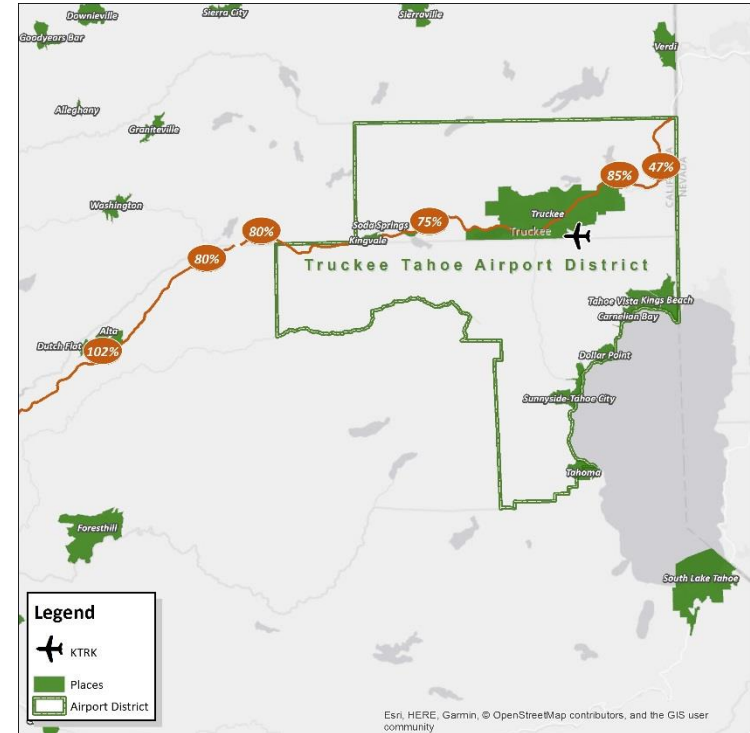
## HIGHWAY CAPACITY AND PLANNED EXPANSION

### Current Capacity

- Volume = 87% of build capacity
- Peak hour traffic (at Truckee)
  - 4,200 vehicles per hour (5,200 capacity)
  - 4,100 vehicles per hour (4,900 capacity)

### Projected Capacity

- Volume = 96% of build capacity
- Peak hour traffic (at Truckee)
  - 5,400 vehicles per hour (5,800 capacity)
  - 5,410 vehicles per hour (5,460 capacity)



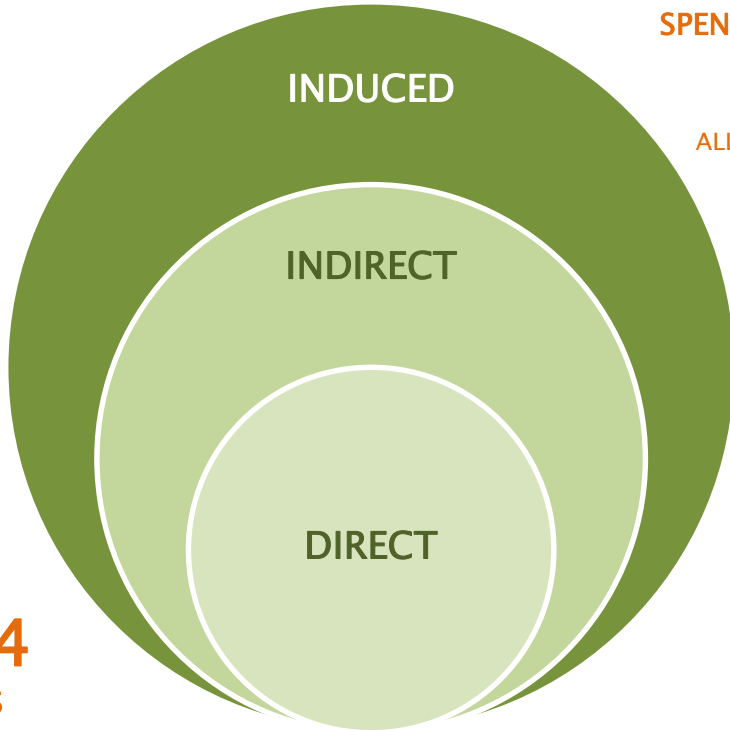
# ECONOMIC IMPACTS

## FINDINGS

# \$73.1 MILLION

SPENDING

3.4%  
ALL SPENDING



3.7%  
ALL JOBS

644  
JOBS

### INDUCED IMPACTS

#### Airport Operations

- 25 jobs
- \$3.4 million output

#### Visitor Spending

- +80 jobs
- +\$10.8 million output

### INDIRECT IMPACTS

#### Airport Operations

- 32 jobs
- \$4.7 million output

#### Visitor Spending

- +69 jobs
- +\$10.7 million output

### DIRECT IMPACTS

#### Airport Operations

- 29 jobs
- \$11.3 million output

#### Visitor Spending

- +410 jobs
- +\$33.3 million output

# ECONOMIC IMPACT

## MULTIPLIER EFFECT

### Total Spending Multiplier Effects Attributable to the Airport

	Direct	Indirect	Induced	Total
<b>Direct Multiplier Effect</b>				
<b>Airport Operations</b>				
Employment	29	32	25	86
Labor Income	\$3,357,534	\$1,412,781	\$1,149,086	\$5,919,401
Value-Added (GRP)	\$4,201,846	\$2,521,624	\$2,105,042	\$8,828,513
Output (Final Demand)	\$11,251,567	\$4,659,563	\$3,396,143	\$19,307,273
<b>Airport Visitor Spending</b>				
Employment			80	558
Labor Income	\$12,200,376	\$3,700,111	\$3,663,278	\$19,061,765
Value-Added (GRP)	\$19,742,933	\$8,809,478	\$6,711,345	\$32,763,756
Output (Final Demand)	\$37,269,550	\$10,689,192	\$10,827,633	\$53,786,376
<b>Total Spending Attributable to Airport</b>				
Employment	439	100	100	644
Labor Income	\$15,616,910	\$4,551,893	\$4,812,366	\$24,981,166
Value-Added (GRP)	\$21,944,779	\$8,831,103	\$8,816,387	\$39,592,269
Output (Final Demand)	\$43,521,118	\$11,348,755	\$14,223,776	\$69,093,649
<b>Multiplier Effect [1]</b>	\$2.8 to 1	\$1.36 to 1	\$1.26 to 1	\$5.50 to 1

Source: Economic & Planning Systems

[Note 1]: Multiplier effect is calculated as the ratio of direct, indirect, and induced spending to direct airport operational spending.

C:\Users\dschwartz.EPSDEN\Desktop\163053\163053- Multiplier Effects.xlsx\TABLE 1- Spending



# AIRPORT-DEPENDENT ECONOMIC ACTIVITY

## “BUT FOR” THE AIRPORT

### Estimate of Loss in Economic Activity if No Airport

	Economic Activity			
	District	Loss	Net	Loss as %
<b>Economic Activity</b>				
Employment	17,486	644	16,842	3.7%
Labor Income	\$758,119,667	\$24,981,166	\$733,138,501	3.3%
Value-Added (GRP)	\$1,244,101,828	\$41,592,269	\$1,202,509,559	3.3%
Output (Final Demand)	\$2,120,915,454	\$73,093,649	\$2,047,821,805	3.4%

Source: Economic & Planning Systems

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**DISTRICT  
ECONOMIC  
ACTIVITY**

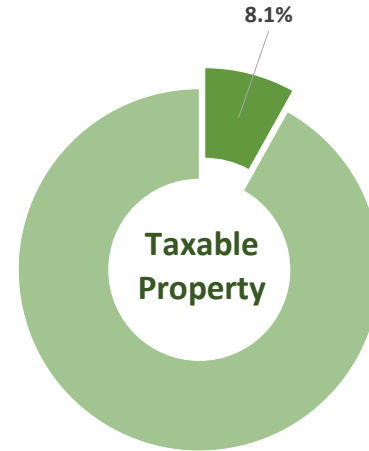
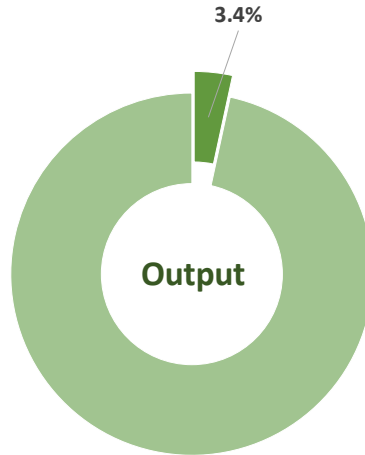
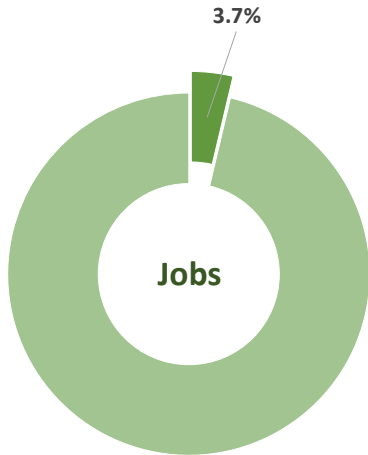
**AIRPORT  
ECONOMIC  
ACTIVITY**

**AIRPORT  
CONTRIBUTION**



# DISTRICT CONTEXT

## THREE PRIMARY METRICS



**THANK YOU**

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