DEMAND DRIVERS STUDY

TRUCKEE TAHOE AIRPORT

Mead & Hunt

DEMAND DRIVERS STUDY

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DEMAND DRIVERS STUDY

EXECUTIVE SUMMARY

The Demand Drivers Study for the Truckee Tahoe Airport (TRK or the Airport) investigates which potential aviation and non-aviation variables correlate to changes in aviation activity at the Airport. Data analysis is augmented by surveys and interviews which explore how the Truckee Tahoe Airport District (TTAD or the District) can affect these variables. Analysis includes factors that are under the control of TTAD, can be influenced by the District, and those that are outside of TTAD control and influence. The core questions for this Study include the following.

- Does the presence of certain airport infrastructure, improvements, and aviation products, services, pricing and facilities encourage aircraft to utilize TRK when they might otherwise choose other airports in the region or not come to the area at all?
- If adding airport infrastructure, improvements, and aviation products, services, and facilities will increase aircraft operations, which have the highest correlation to that increase?
- Are there airport infrastructure, improvements, aviation products, services, and facilities that could be added and/or should be considered for removal in order to change aircraft operation levels?
- What do the passengers want? Why are people coming here?

This Study is organized as follows:

- Executive Summary
- Aviation Demand Drivers
- Non-Aviation Demand Drivers
- Summary and Conclusions
- Appendices

Key Takeaways from this Report:

The two major factors influencing activity at TRK are outside of the control of the Airport:

1. **The location of the Airport and its relation to the Truckee - Tahoe Area.**
2. **The economic health of the nation and region.**

Summary of Findings

Several research methods are used to answer the core questions of the Study, described below.

- A local market assessment.
- Historical analysis of general aviation statistics and trends.
- Correlation analysis of trends to based aircraft and general aviation itinerant operations.
- Surveys of based aircraft tenants and transient aircraft users.
- Interviews of select based tenants and transient users of TRK.

A quantitative assessment of TRK's based aircraft and itinerant aircraft operations performance in comparison to the performance of national and regional aviation industry trends over a 10 year period (2005 to 2014) was conducted. The assessment consisted of a correlation analysis to identify possible demand influencers that might impact activity levels at TRK.

Demand Influencers: Variables that directly or indirectly cause changes in demand under full or partial control of TTAD.

Examples include pavement maintenance, service offerings, and pricing.

Demand Drivers: Variables that are completely outside of TTAD control.

Examples include proximity to final destination, aircraft deliveries and the economy.

The correlation analysis shows that TRK based aircraft have reasonably performed in-line with national aviation trends, meaning that Airport based aircraft increases and declines at a proportional rate to that of the national airspace system. TRK, like the rest of the country, has seen based aircraft decline as aircraft and pilots retire, and aircraft ownership costs grow. It is important to note that TRK based aircraft over the 10 year period studied may have been artificially impacted by the availability of hangar space, including the availability of large hangar space. However, the correlation analysis also shows that itinerant aircraft operations do not have a reasonable correlation with national and regional aviation industry trends. Therefore, this study is unable to draw a reasonable conclusion on national aviation trends being possible demand influencers on TRK itinerant aircraft operations (page 7).

Guiding Principles: This report describes data gathered for the purpose of determining influencers and drivers at TRK. Data and opinions gathers during this project are presented without edit. This report and analysis are intended to be informative rather than prescriptive.

The research results suggest that the primary demand drivers at TRK are outside of TTAD control. These demand drivers include the Airport's proximity to the user's primary or secondary residence, proximity to Lake Tahoe, and proximity to local mountain resorts. Factors that drive demand which are in the control of TTAD include availability of aircraft storage and snow removal capabilities. Surveys and interviews identified additional attributes and amenities desired by airport users such as: deicing services, additional aircraft storage and improved instrument flight rules procedures. Survey respondents believe these factors would support continued growth in Airport use and operations. The key takeaways from this analysis are:

- The correlation analysis suggests that TRK is not the primary demand driver in the local area, but is instead responding to it (page 7 and 27).
- Aviation activity in the region is not spread evenly across the airports, and TRK sees less traffic than five of the seven airports studied according to FAA and TRK records. However, it is possible that some area airports have inaccurate operations numbers (pgs. 11-12).
- The most important reason for using TRK is proximity to where the pilots and passengers want to go, be it recreational or residential (pgs 17, 20, 21, 25, 29, 30)
- Based aircraft at TRK perform in line with national trends; however, growth in based aircraft is limited by the availability of hangars and parking spaces – meaning that there is not much change in based aircraft levels from year to year (pgs. 7, 8, 12).
- Aircraft operations totals have not performed in line with national trends, growing at TRK while national activity indicators have been declining (pgs. 7, 8, 11).
- Survey responses show that there are changes to pricing and service availability that could make users more or less likely to use TRK (pgs. 17, 18, 21, 22, 23, 24).

Based Aircraft and Itinerant Operations Correlation

The number of based aircraft at TRK may be affected by the following aviation demand influencers throughout the forecast period (pg. 8):

- Single Engine Piston New Aircraft Deliveries
- Business Jet New Aircraft Deliveries
- California and United States Active Pilots
- General Aviation and On-Demand 14 CFR Part 135 Active Aircraft (California and United States)
- General Aviation and On-Demand 14 CFR Part 135 Hours Flown (California and United States)

There were not a sufficient number of positive correlations to draw conclusions on demand influencers of itinerant operations (pg. 8).

Based Operation: Operation by an aircraft that is based at TRK. This operation may be an Itinerant or Local operation.

Transient Operation: Operation (Itinerant or Local) by an aircraft that is not based at TRK.

Itinerant Operation: Takeoff or landing operations of airplanes going from one airport to another airport that involves a trip of at least 20 miles.

Local Operation: Any operation performed by an aircraft that (a) operates in the local traffic pattern or within sight of the tower or airport, or (b) is known to be departing for, or arriving from, flight in local practice areas located within a 20-mile radius of the control tower or airport. (FAA AC 150/5325-4B)

A core question of this study is "Which of these demand influencers are demand drivers? The results above may help focus on what factors influence based aircraft demand at TRK, however correlation analysis alone cannot answer this question. Supplemental information collected through interviews and surveys provided a more robust understanding. The correlation data suggests that based aircraft at TRK increases and decreases with national aviation factors: aircraft deliveries, active pilots, and hours flown.

Aviation Interviews

The key takeaway from interviews with pilots who regularly utilize TRK (based and transient pilots) is that the primary reason for basing (or operating) at TRK is the proximity to aircraft owners (or passengers) homes and business. There is also a consensus of those interviewed that proximity to recreational areas and resorts in the Truckee-Tahoe region drives TRK activity (pages 17-18).

Aviation Survey

A survey was sent out to based and transient aircraft customers to determine the needs and perspective of based and transient customers. The following are key takeaways rom this survey (pages 19-24):

- In general, the location of an airport is a significant driver in demand (pg. 20).
- The survey found that 17 of the based aircraft respondents are on the TTAD-maintained wait list for aircraft storage and 13 of the 17 are waiting for a box hangar. This may indicate that current users of TRK will operate here, even when their preferred type of aircraft storage is not available. This is evidence that there are draws outside of airport facilities driving users to the region (pg. 20).
- A significant majority (90% combined) of based and itinerant aircraft respondents determined that the Airport's proximity to their local residence is very important, with 63% of based aircraft respondents stating it was an absolute necessity (pg. 20).
- Facilities that TRK could add that may grow traffic include better instrument procedures, aircraft deicing services or availability of a hangar for deicing, and cheaper fuel (pg. 24).
- Runway dimensions appear to be adequate for most users. Conversely, decreasing runway length could have a significant impact on itinerant operators, as would the elimination of fuel services, increasing fuel pricing or itinerant use fees, not maintaining pavement, and reducing services (pg. 24).

Non-Aviation Demand Drivers

Aviation demand at TRK is found to have a strong correlation with the following non-aviation influencers (pages 27-28):

- Total Residential Housing Units
- Number of Households
- Population
- Median Age
- Average Household Income
- Median Household Income
- Visitor Spending
- Total Revenue
- Average Crude Oil Spot Price
- U. S. Gross Domestic Product (GDP)
- S&P 500 Average Close

Non-Aviation Market Assessment

Discussions with local leaders and developers plus TRK operations staff provided another perspective of what drives demand in the region and at TRK. A summary of findings from these discussions (pages 29-30):

- Customer Base: generally second homeowners, from the Bay Area. Ages range from young families to retirees. Most respondents made the point that these constituents are perceived to be affluent (pg. 29).
- Visitor Demand: Common answers for what drives constituents to the region include recreation activities associated with the mountains and Lake Tahoe, plus proximity and easy access to the Bay Area (pg. 29).
- Area Access: Automobile access still dominates how constituents access the area, however most interviewees described an increase in Airport use by their constituents. This includes some resorts and associations seeing 25 percent of constituents using TRK (pg. 30).
- The lifestyle and area are primary driving factors to the area. Affluent people have chosen to build homes here, and have the means to utilize TRK, if they choose to (pg. 30).

Based on these interviews it is assumed that future high end development will have a positive correlation on aircraft activity at TRK.

TTAD Board Request

After draft review, the TTAD requested correlation between jets and non-jets to aviation and non-aviation data points. Correlation analysis is the process of comparing the trends of two variables over a period of time (e.g., 10 years). There is insufficient data points to identify different correlations between jets and non-jets to the aviation industry or non-aviation data points. In essence, there was only one trend change provided for jets and non-jets (2010, when different percentage splits were provided between jet and turboprop).

1. AVIATION DEMAND DRIVERS

Aviation demand drivers focus on variables and circumstances in the realm of the general aviation industry. The research approach includes quantitative assessment of the performance of demand driver variables over time, and qualitative assessment of user preference and opinion through a survey and interview. The result of the aviation demand drivers analysis is an assessment of what on-airport facilities and services drive demand at TRK, and how changes to these facilities might influence future activity.

1.1 Aviation Demand Influencer Research Results

Research focuses on potential aeronautical demand influencers[1] that might impact activity levels at TRK. Analysis reviews how fluctuations of demand driver variables are reflected in the number of based aircraft at TRK, and the number of itinerant operations at TRK (collectively referred to as "activity levels"). This section focuses on the quantitative data analysis, which is supported by the market assessment described in **Section 1.2,** interviews described in **Section 1.3**, and a survey described in **Section 1.4**.

A. Research Approach

Analysis of demand influencers considers ten years of historical data (for the January 1, 2005 to December 31, 2014 period) and provides an analysis of how Airport activity levels have correlated with the historical demand influencer data sets. Analysis is done at the annual level, using the calendar year. Annual data is chosen to smooth out seasonal peaking that may occur at certain times of the year in the demand influencer data sets which could lead to variables appearing more or less correlated than they should. The following data sets are analyzed to determine correlation with activity levels at TRK.

- New Aircraft Deliveries
- Active Pilots
- General Aviation and On-Demand2 Active Aircraft
- General Aviation and On-Demand Hours Flown

Appendix A provides an overview of the general aviation industry, historical statistics, trends and industry forecasts.

[1] An external factor that makes aircraft operations grow or decline at an airport.

[2] "General Aviation" includes flights operated under 14 CFR Part 91K and 14 CFR Part 135

B. Research Methodology

Potential demand influencers are screened using correlation analysis, which tracks how two independent variables change in relation to each other. This analysis results in a determination of a trend correlation coefficient (correlation coefficient) for each demand influencer at TRK.

The correlation coefficient illustrates the extent to which the value of one variable correlates with a second variable. The correlation coefficient is not impacted by units or scale, but rather, the strength of the linear relationship between the two variables.

While correlation can indicate possible interrelatedness of two variables, it does not imply causality. Variables with a strong correlation coefficient may be influenced by a third variable. An example is the sale of luxury handbags and high end bottles of wine in a given geographic area. The sales numbers of both may grow and decline similarly; however, one would not contend that the sale of handbags is not driving consumers to purchase wine. Instead, a third variable, such as a geographic area's economic and financial growth may be driving demand for both variables. For this reason, professional judgment and industry experience are essential to help explain results of correlation analyses.

This analysis uses the Pearson Product-Movement Correlation Coefficient, which is obtained by dividing the covariance of the two random variables by the product of their standard deviations. This correlation coefficient shows the direction of the relationship by the resulting sign (+ or -). A positive correlation coefficient means that as the value of one variable increases, the value of the second variable also increases. A negative correlation means that as one variable increases, the second variable decreases.

To determine the value of the correlation coefficient (denoted with r), the absolute value of the result is utilized. For example, a correlation coefficient of r = 0.5 indicates a stronger degree of linear relationship than a correlation coefficient of r = 0.4. A correlation coefficient of zero (r = 0.0) indicates the absence of linear relationship while correlation coefficients of r = 1.0 indicate a perfect linear relationship.

C. Research Results

The correlation analysis returns a correlation coefficient for each variable. In order to derive which variables require further investigation, the following criteria were applied.

- r = 0.30 – 0.49 (highlighted in yellow) indicates a moderate positive correlation
- r = 0.50 and above (highlighted in green) indicates high positive correlation

Variables with correlation coefficients less that r = 0.30 were considered to be weakly correlated or negatively correlated, and were not retained for further analysis. Results of the correlation analysis for based aircraft are included in **Figure 1**, and results for itinerant operations are included in **Figure 2**[3]**.**

3 United States includes 50 States and Overseas Territories.

Figure 1: Based Aircraft Correlation Analysis Results

Truckee Tahoe Airport Correlation Analysis (Based Aircraft)											
Demand Influencers	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TREND CC
Based Aircraft (Total)	233	233	233	233	233	234	223	218	214	212	N/A
New Aircraft Deliveries (U.S)											
SE Piston	2,326	2,513	2,417	1,943	893	781	761	817	908	986	0.57
ME Piston	139	242	258	176	70	108	137	91	122	143	0.32
Turboprop	375	412	465	538	446	368	526	584	645	603	-0.87
Business Jet	750	887	1,137	1,317	874	767	696	672	678	722	0.58
Active Pilots											
California	68,693	65,867	64,129	65,116	61,709	64,529	62,606	61,185	59,841	59,213	0.81
Nevada	6,874	6,757	6,654	6,886	6,677	7,008	6,954	6,927	6,811	6,841	-0.19
*United States**	609,735	597,109	590,349	613,746	594,285	627,588	617,128	610,576	599,086	593,499	0.19
General Aviation and On-Demand 14 CFR Part 135 Active Aircraft											
California	25,337	23,854	23,813	25,292	24,811	22,830	N/A	21,316	20,560	N/A	0.87
Nevada	2,990	3,374	3,512	3,093	2,022	2,030	N/A	2,246	2,322	N/A	0.39
*United States**	224,352	221,943	231,607	228,663	223,876	223,370	N/A	213,665	204,085	N/A	0.91
General Aviation and On-Demand 14 CFR Part 135 Hours Flown (in Thousands)											
California	2,871	3,201	2,540	2,651	2,555	2,350	N/A	2,309	2,331	N/A	0.54
Nevada	413	625	573	377	276	343	N/A	319	323	N/A	0.40
*United States**	26,982	27,705	27,851	26,009	23,763	24,802	N/A	24,554	23,009	N/A	0.62

*Includes other U.S Territories

It is important to note that the based aircraft from 2005 to 2014 may have been artificially impacted by the following two attributes. Due to the winter climate at TRK, a significant majority of based aircraft require hangar storage. During the period from 2005 to 2010, the number of based aircraft was consistent with the number of available hangars at TRK. Therefore, if there were more hangars, TRK may have had more based aircraft. Conversely, from 2011 to 2014, the demand for larger hangars surpassed the availability and the number of based aircraft may have dropped due to the lack of availability. These two observations are supported by the past and current hangar wait lists at TRK. Therefore, it is important to consider that the moderate and high positive correlations with industry trends may be impacted by these artificial impacts.

Figure 2: Itinerant Operations Correlation Analysis Results

Truckee Tahoe Airport Correlation Analysis (General Aviation Itinerant Operations)											
Demand Influencers	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TREND CC
General Aviation Itinerant Operations	10,213	14,307	15,618	11,031	14,908	15,533	15,398	15,863	16,729	17,875	N/A
New Aircraft Deliveries (U.S)											
SE Piston	2,326	2,513	2,417	1,943	893	781	761	817	908	986	-0.59
ME Piston	139	242	258	176	70	108	137	91	122	143	-0.15
Turboprop	375	412	465	538	446	368	526	584	645	603	0.50
Business Jet	750	887	1,137	1,317	874	767	696	672	678	722	-0.46
Active Pilots											
California	68,693	65,867	64,129	65,116	61,709	64,529	62,606	61,185	59,841	59,213	-0.85
Nevada	6,874	6,757	6,654	6,886	6,677	7,008	6,954	6,927	6,811	6,841	-0.09
*United States**	609,735	597,109	590,349	613,746	594,285	627,588	617,128	610,576	599,086	593,499	-0.31
General Aviation and On-Demand 14 CFR Part 135 Active Aircraft											
California	25,337	23,854	23,813	25,292	24,811	22,830	N/A	21,316	20,560	N/A	-0.79
Nevada	2,990	3,374	3,512	3,093	2,022	2,030	N/A	2,246	2,322	N/A	-0.42
*United States**	224,352	221,943	231,607	228,663	223,876	223,370	N/A	213,665	204,085	N/A	-0.50
General Aviation and On-Demand 14 CFR Part 135 Hours Flown (in Thousands)											
California	2,871	3,201	2,540	2,651	2,555	2,350	N/A	2,309	2,331	N/A	-0.55
Nevada	413	625	573	377	276	343	N/A	319	323	N/A	-0.10
*United States**	26,982	27,705	27,851	26,009	23,763	24,802	N/A	24,554	23,009	N/A	-0.46

*Includes other U.S Territories

For Figures 1 and 2: N/A represents no data available for this year. This does not negatively affect the correlation analysis.

General aviation itinerant operations at TRK have increased over the period studied. Conversely, demand influencers except for deliveries of turboprops, have decreased or remained flat over the period studied. As such, the resulting correlation coefficients are negative. While negative correlation coefficients from can indicate correlation between variables, the potential cause and effect of the negative correlation must be viewed to determine whether further investigation is relevant. For instance, the highest negative correlation coefficient for TRK general aviation itinerant operations was California active pilots (-0.85). However, it is not reasonable to assume that if actions were taken to continue to drive down California active pilots that general aviation itinerant operations at TRK would increase. Therefore, the negative correlations identified in Figures 1 and 2 are only interesting, but not relevant to this demand driver analysis.

D. Findings

The following aviation demand influencers may impact the number of based aircraft at TRK throughout the forecast period. These demand influencers are indices of how busy the regional and national general aviation system is. TRK is a part of this system.

- Single Engine Piston New Aircraft Deliveries
- Business Jet New Aircraft Deliveries
- California and United States Active Pilots
- General Aviation and On-Demand 14 CFR Part 135 Active Aircraft (California and United States)
- General Aviation and On-Demand 14 CFR Part 135 Hours Flown (California and United States)

There were not a sufficient number of positive correlations to draw conclusions on demand influencers of TRK itinerant operations.

The core question of this analysis is “Which of these demand influencers are demand drivers?” Correlation analysis alone cannot answer this question; however, the results help direct further research into what is driving demand for based aircraft at TRK. Correlation suggests (but does not outright confirm) that based aircraft at TRK increases and declines with aircraft deliveries and active aircraft, active pilots, and the number of hours flown. This means that activity at TRK grows and declines in proportion with activity in the overall general aviation system.

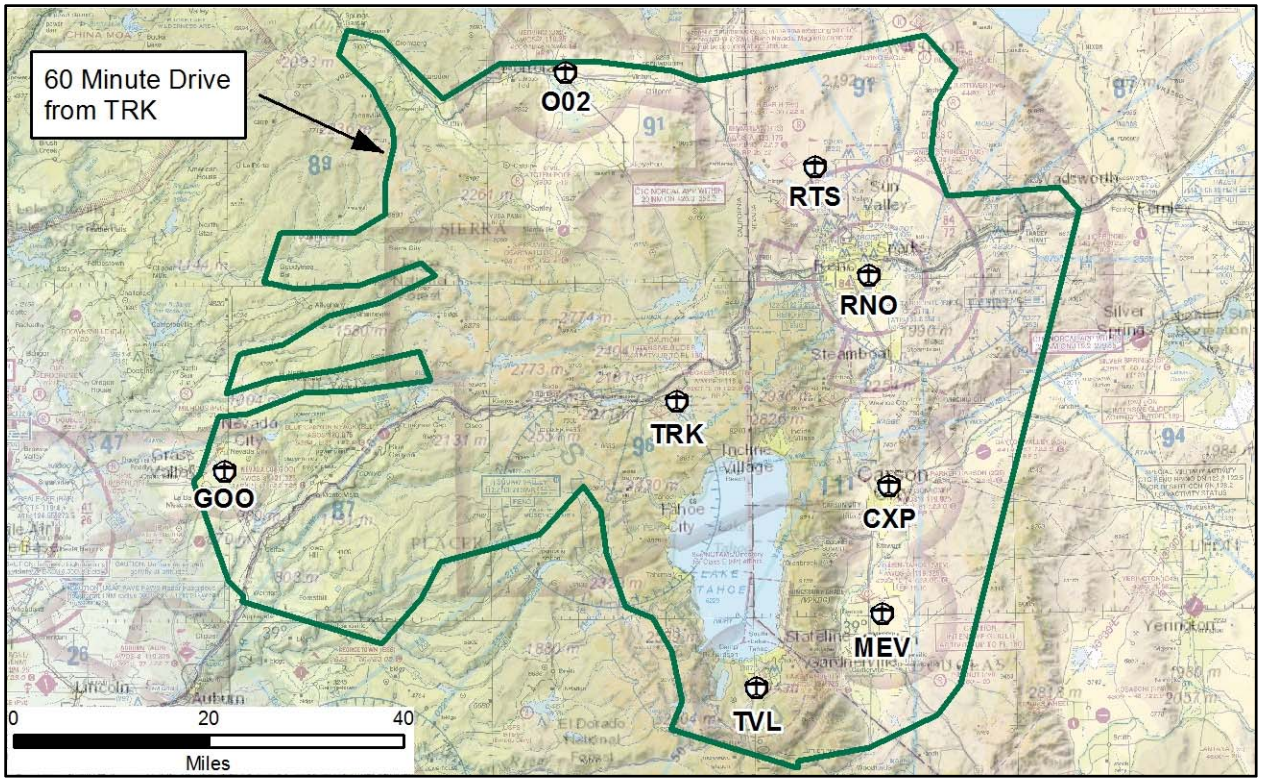
Going forward, the results of the correlation analysis suggest that based aircraft at TRK is not an anomaly, nor is it counter to regional and national trends. The follow up question to these results is “Why do customers base their aircraft at TRK over other area airports?” The Market assessment in **Section 1.2** compares facilities at TRK to other airports, and provides the result of user input on why they choose to use the Airport over other airports.

1.2 Aviation Market Assessment

The Market Assessment looks at competitive airports near TRK and provides analysis of similar and dissimilar facilities and services offered at each compared to TRK. An airport is considered competitive if it is located within 60 miles driving distance, has similar aviation infrastructure, and offers similar products, services, or facilities. There are seven airports that meet these criteria, shown in **Figure 3**.

- Reno/Tahoe International Airport (RNO)
- Reno/Stead Airport (RTS)
- Lake Tahoe Airport (TVL)
- Carson Airport (CXP)
- Minden-Tahoe Airport (MEV)
- Nervino Airport (O02)
- Nevada County Air Park (GOO)

Figure 3: Area Airports



Each of the competitive airports has unique attributes which is difficult to make straight-line comparisons with TRK. The reason for this is that these airport fulfill different roles in the FAA National Airspace System, as shown by their National Plan of Integrated Airport Systems (NPIAS) classifications:

- One Small-Hub Primary Commercial Service airport (RNO)
- Two General Aviation Reliever airports (RTS and CXP)
- Five General Aviation airports (TVL, MEV, O02, and GOO, plus TRK)

RNO is the only airport to have a continuously operating air traffic control tower and air carrier service; whereas the other airports are not towered and primarily serve general aviation users. RNO is included in this assessment because of the destination/resort market that RNO serves and the high level of transient business aviation jet activity.

Competitive airports are reviewed using the following categories: Fuel Volumes, Aircraft Operations, Based Aircraft, and Markets Served. Fuel volumes, aircraft operations, and based aircraft illustrate how the region's air traffic is divided amongst the airports. Markets served helps explain why some aircraft choose one airport over another.

Fuel Volumes

Fuel volumes measure how much fuel is sold at each of the airports. The range of volumes is explained by the location of the airports, corresponding annual aircraft operations, and the operational fleet mix (the various types of aircraft using the airport). TRK ranked fourth in annual fuel volumes.

Figure 4: Fuel Volume Sales at Area Airports

	Fuel Volume (Gallons)		
Airport	**AvGas (100LL)**	**Jet A**	**Total**
Reno-Tahoe International	146,000	2,113,000	2,259,000
Minden Tahoe	500,000	1,000,000	1,500,000
Carson	300,000	200,000	500,000
Truckee Tahoe	92,000	309,000	401,000
Lake Tahoe	35,000	220,000	255,000
Reno/Stead	97,000	121,000	218,000
Nervino	N/A	None	N/A
Nevada County Air Park	102,000	68,000	170,000
Source: Airport Management Interviews			

From a demand drivers prospective, the key takeaway is that all of the airports reviewed sell both Jet A and 100LL fuel. The difference in sales between the two types of fuel provide insight into what aircraft frequent these airports. When associated with based aircraft records that are discussed below, fuel volumes can be used to help determine what types of aircraft are drawn to the airports on an itinerant basis. Since the availability of fuel is not a differentiation between the airports studied, other variables can be evaluated.

Aircraft Operations

Aircraft operations represent the number of takeoffs and landings. Outside of RNO, none of the airports have an airport traffic control tower. This means that operations totals are based on filed flight plans and FAA estimates. This data may not be 100 percent accurate, but represents the best information available. TRK has a wide area multi-lateration system, provided by vector, which provides more accurate aircraft operations counts. The FAA classifies operations as local, where the aircraft stays near the airport, and itinerant, where aircraft fly from one airport to another. This analysis focuses on itinerant operations only because this study looks to determine what makes them fly to one airport over another. Itinerant operations by airport for 2014 are below.

Figure 5: Itinerant Operations at Area Airports

Airport	Itinerant Operations	Regional Market Share
Carson[1]	45,000	24%
Minden Tahoe[1]	37,500	20%
Reno-Tahoe International[2]	34,158	18%
Reno/Stead[1]	19,000	10%
Lake Tahoe[1]	18,887	10%
Truckee Tahoe	13,976	7%
Nevada County Air Park[1]	13,000	7%
Nervino[1]	8,000	4%
Total	189,511	100%

1: Itinerant operations at non-towered airports are typically estimated for official FAA records. It is possible that reported itinerant operations are higher than actual.
2: RNO operations do not include "air carrier"
Source: FAA Terminal Area Forecast, Airport Records (TRK only).

Itinerant operations show how visitors to the region are divided up amongst the area airports. The market share shows that operations are not divided evenly amongst the area airports, with an eight percent gap between the third busiest airport and the fourth busiest airport. One detractor from the quality of this data is that outside of RNO and TRK, these airports do not have an accurate method of monitoring aircraft operations. Therefore, these totals are estimates based on FAA national-level projections or local spot checks for a day a quarter and extrapolated for the entire year. With this in mind, the information presented represents the best data available. The top three airports account for 62 percent of total operations, and the bottom four make up the remaining 38 percent. The uneven distribution of itinerant operations indicates that the busier airports are closer to what draws visitors to the region – be it for business of leisure. Reasons behind why these aircraft choose other airports are explored in **Section 1.3** and **1.4**.

Based Aircraft

TRK has the most based aircraft of all the airports analyzed in the study with 227 based aircraft followed by Carson Airport and Minden Tahoe Airport. Based aircraft are categorized as piston-powered, turbine (jet) powered, and helicopter / other (including ultralights and gliders). This total includes seasonally based, and permanently based aircraft.

Figure 6: Based Aircraft

Airport	Piston Single + Multi	Turbine Jet + Prop	Helicopter / Other	Total	Market Share
Truckee Tahoe	207	12	8	227	22%
Carson	176	5	25	206	20%
Minden Tahoe	193	4	4	201	19%
Nevada County Air Park	134	1	1	136	13%
Reno-Tahoe International	104	9	15	128	12%
Reno/Stead	90	7	12	109	10%
Lake Tahoe	27	0	4	31	3%
Nervino	16	0	0	16	1%
Total	947	38	69	1,054	100%

Source: Airport 5010 Forms, Airport Records (TRK only)
Total based aircraft included permanent and seasonally based aircraft.

The top three airports of the eight studied each have about a fifth of the regional market share, the middle three airports each have about a tenth of the market share, and the bottom two airports have less than five percent of market share combined. Reasons for this distribution include lack of aircraft storage availability (Lake Tahoe) and proximity to population centers (Nervino).

Markets Served

Markets served define the role of an airport in the greater system of nearby airports. The system has one airport with scheduled commercial service (RNO), and two airports with Air National Guard facilities (RNO and RTS). The other airports serve general aviation markets, which include the recreational, flight training, and business markets. Airports build facilities to support the needs of the markets that they serve, or wish to serve. Private industry (or the airport operator) provides services that cater to these markets. Examples of key facilities include runway length, the availability of instrument flight procedures, pavement weight bearing capacity, and aircraft parking and storage. Examples of key services include a fixed base operator, fuel, and maintenance. Airport facilities and services are described in **Section 1.2.2**

1.2.1. Airport Profile

Figure 7: TRK Profile

Item	Information
Airport Name	Truckee Tahoe Airport
FAA Airport Identifier	TRK
City and State	Truckee, California
Distance/Direction from CBD	2 miles East of the Central Business District
Airport Sponsor	Truckee Tahoe Airport District
Type of Airport Sponsor	Airport District
Airport Governing Body	Board of Directors
Type of Airport Governing Body	☒Elected ☐Appointed
Airport Advisory Body	Airport Community Advisory Team
Airport Operator	Truckee Tahoe Airport District
Type of Airport Operator	District
Airport Management	☒Full-Time ☐Part-Time ☐None
Number of Employees	22
Part of an Airport System[4]	No
Type of NPIAS Airport	☐Primary Commercial Service ☐Non Primary Commercial Service ☐General Aviation Reliever ☒General Aviation
Type of Asset Study Airport	☐National ☒Regional ☐Local ☐Basic
Part 139 Airport Classification	☐Class I ☐Class II ☐Class III ☐Class IV
Airport Reference Code (ARC)	AAC: ☐A ☒B ☐C ☐D ☐E ADG: ☐I ☒II ☐III ☐IV ☐V RVR: ☐VIS ☐5000 ☐4000 ☐2400 ☐1600 ☐1200
Market Segments Served	**Industry** ☐Air Carrier *(diversions only)* ☐Military ☒General Aviation **General Aviation** ☒Personal ☒Business ☒Commercial ☒Government
Air Traffic Control Tower	☐FAA ☐Contract ☒None
Aircraft Rescue and Firefighting (ARFF) Index[5]	None, However an ARRF certified truck is housed at the nearby Truckee Fire Protection District Station

[4] An airport system includes multiple airports owned and/or operated by a single sponsor/operator.

[5] Index A (aircraft less than 90 feet in length); Index B (aircraft at least 90 feet but less than 126 feet in length); Index C (aircraft at least 126 feet but less than 159 feet in length); Index D (aircraft at least 159 feet but less than 200 feet in length); and Index E (aircraft at least 200 feet in length).

1.2.2. Subject and Competitive Airport Overviews

Figure 8: Airport Facilities

	Subject Airport	Airport 1	Airport 2	Airport 3	Airport 4	Airport 5	Airport 6	Airport 7
Airport Name	**Truckee Tahoe Airport**	**Reno/Tahoe International Airport**	**Reno/Stead Airport**	**Lake Tahoe Airport**	**Carson Airport**	**Minden-Tahoe Airport**	**Nervino Airport**	**Nevada County Air Park**
FAA Airport Identifier	TRK	RNO	RTS	TVL	CXP	MEV	O02	GOO
City and State	Truckee, CA	Reno, NV	Reno, NV	South Lake Tahoe, CA	Carson City, NV	Minden, NV	Beckwourth, CA	Nevada City, CA
Distance/Direction from Downtown	2 Miles East	3 Miles SE	10 Miles NE	3 Miles SW	3 Miles NE	4 Miles N	1 Mile E	3 Miles E
Distance/Direction from Subject Airport	-	38 Miles by Road 20 Miles by Air	49 Miles by Road 24 Miles by Air	47 Miles by Road 26 Miles by Air	45 Miles by Road 20 Miles by Air	47 Miles by Road 26 Miles by Air	55 Miles by Road 31 Miles by Air	60 Miles by Road 40 Miles by Air
Airport Sponsor	Truckee Tahoe Airport District	Reno-Tahoe Airport Authority	Reno-Tahoe Airport Authority	City of South Lake Tahoe	City of Carson	Douglas County	Plumas County	Nevada County
Type of Airport Sponsor	Special District	Airport Authority	Airport Authority	City	City Council	County	County	County
Airport Governing Body	Board of Directors	Board of Trustees	Board of Trustees	City Council	Airport Authority	County Commissioners	Board of Supervisors	Board of Supervisors
Type of Airport Governing Body	Elected	Appointed	Appointed	Elected	Appointed	Elected	Elected	Elected
Type of Airport Operator	Airport District	Airport Authority	Airport Authority	Airport Department	Airport Authority	Contract Airport Management	Facility Services Department	Airport Department
Airport Advisory Body	Yes	No	No	No	No	Yes	No	Yes
Number of Employees	22 FTE	246 FTE	7 FTE	4 FTE	2 FTE	6 FTE	2 FTE – 4 Temp	3 FTE
Part of an Airport System	No	Yes	Yes	No	No	No	Yes	No
Type of NPIAS Airport	General Aviation	Small Hub	GA Reliever	General Aviation	GA Reliever	General Aviation	General Aviation	General Aviation
Type of Asset Study Airport	Regional	N/A	Basic	Local	Regional	Regional	Local	Local
Part 139 Airport Classification	N/A	Class I	N/A	N/A	N/A	N/A	N/A	N/A
Airport Reference Code (ARC)	B-II		C-III	B-II	B-II	C-III	B-I	B-I
Market Segments Served	GA/Mil/Corp	AC/Mil/GA/Corp	GA/Mil/Corp	GA/Corp	GA/Corp	GA/Corp	GA	GA/Corp
Airport Size (acres)	2,280	1,450	5,170	348	632	996	99	117
Number of Runways	2	3	2	1	1	3	1	1
Longest Runway	7,000’ X 100’	11002’ X 150’	9,000’ X 150’	8,544” X 150’	6101’ X 75’	7,400’ X 100’	4651’ X 75’	4351’ X 75’
Weight Bearing Capacity	SW 50.0 DW 80.0	SW 75.0 DW 185.0 DWT 350.0 DDTW 850.0	SW 75.0 DW 200.0 DWT 320.0	SW 70.0 DW 125.0 DWT 210.0	SW 30.0 DW 60.0	SW 50.0 DW 75.0	SW 12.0	SW 30.0 DW
Precision Approaches	None	ILS W/ MALSR	ILS W/ MALSR	None	None	None	None	None
Non-Precision Approaches	GPS	LOC/GPS/VOR/NDB	GPS	GPS/LDA/VOR	GPS	GPS	GPS	GPS/VOR
Air Traffic Control Tower	No	Yes	No	No	No	No	No	No
ARFF Index	N/A	ARFF Index C	N/A	N/A	N/A	N/A	N/A	N/A

Figure 9: Annual Airport Activity Levels

Airport Profiles	Subject Airport	Airport 1	Airport 2	Airport 3	Airport 4	Airport 5	Airport 6	Airport 7
Airport Name	Truckee Tahoe Airport	Reno/Tahoe International Airport	Reno/Stead Airport	Lake Tahoe Airport	Carson Airport	Minden Tahoe Airport	Nervino Airport	Nevada County Air Park
FAA Airport Identifier	TRK	RNO	RTS	TVL	CXP	MEV	O02	GOO
Aircraft Operations								
Air Carrier	0	34,687	0	0	0	0	0	0
Air Taxi	1,000	12,071	0	1,100	7,500	2,500	0	1,000
General Aviation Local	21,000	4,234	42,000	4,525	38,500	42,000	4,000	14,750
General Aviation Itinerant	12,976	20,751	19,000	17,440	37,500	35,000	8,000	12,000
Military	24	2,125	10,000	475	0	300	0	0
TOTAL	35,000	73,868	71,000	23,540	83,500	79,800	12,000	27,750
Based Aircraft								
Single-Engine	179	68	83	25	155	163	15	126
Multi-Engine	28	36	7	2	21	30	1	8
Jet	12	9	7	0	5	4	0	1
Helicopter	4	7	0	4	3	4	0	1
Other	4 (gliders)	8 (military)	12 (Military) 2 Other	0	22 (UL/Gliders)	0	0	0
TOTAL	227	128	111	31	206	201	16	136
Fuel Volumes								
Jet Fuel (General Aviation)	309,000	Unknown	121,357	219,506	200,000	1,000,000	102,000	102,018
Jet Fuel (Air Carrier)	-	Unknown	0	0	0	0	0	-
Jet Fuel (Military)	-	Unknown	0	0	0	(included above)	0	-
Avgas	92,000	Unknown	97,337	34,880	300,000	500,000	68,000	67,818
Mogas	0	Unknown	0	0	0	0	0	-
Other	-	Unknown	-	-	-	-	-	-
TOTAL	401,000	Unknown	218,694	254,306	500,000	1,500,000	170,000	169,836

Figure 10: Airport Services and Facilities

Airport Profiles	Subject Airport	Airport 1	Airport 2	Airport 3	Airport 4	Airport 5	Airport 6	Airport 7
Airport Name	**Truckee Tahoe Airport**	**Reno/Tahoe International Airport**	**Reno/Stead Airport**	**Lake Tahoe Airport**	**Carson Airport**	**Minden-Tahoe Airport**	**Nervino Airport**	**Nevada County Air Park**
FAA Airport Identifier	TRK	RNO	RTS	TVL	CXP	MEV	O02	GOO
Number of FBOs	1	1	1	1	2	2	1	1
Number of SASOs	1	1	1	0	0	10	0	2
Jet Fuel Price	$4.90 FS	$5.43 FS	$4.65 FS	$4.99 FS	$4.82 FS/$3.45 SS	$4.80 FS	None	$4.95 FS
Avgas Price	$5.64 FS/$5.09 SS	$6.64 FS	$5.43 FS/$5.13 SS	$5.99 FS	$5.16 FS/$4.69 SS	$5.35 FS/$5.25 SS	N/A	$4.80 FS/$4.65 SS
Mogas Price	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aircraft Ground Handling Services	Yes - (1)	Yes	Yes	Yes	Yes	Yes	No	Yes
Passenger and Crew Services	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Passenger and Crew Facilities	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Airframe MRO	Major	Major	Major	Minor	Major	Major	Major	Major
Powerplant MRO	Major (2)	Major	Major	Minor	Major	Major	Major	Major
Propeller MRO	No	No	No	No	No	No	No	No
Radio and Instrument MRO	No	Yes	Yes	No	Yes	Yes	No	No
Paint	No	No	No	No	No	No	No	No
Interior	No	No	No	No	No	No	No	No
Aircraft Rental	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Flight Training	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Aircraft Management	No	No	No	No	No	Yes	No	No
Aircraft Charter	No	Yes	No	Yes	Yes	Yes	No	Yes
Aircraft Sales	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Other	Glider Towing	US Customs	Oxygen	Oxygen	Oxygen	Oxygen	None	Oxygen
Type of Facilities								
General Aviation Terminal	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Community Hangars	No	Yes	Yes	No	Yes	Yes	Yes	Yes
Corporate Hangars	No	Yes	Yes	No	Yes	Yes	No	Yes
Executive Hangars	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
T-Hangars	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Government	No	Yes	Yes	No	No	No	No	No
Military	No	Yes/ANG	Yes/ANG	No	No	No	No	No
Non-Aeronautical	Yes – Café	Yes – Terminal Concessions	No	Yes – Office/ Restaurant	Yes - Office	Yes – Office/Café	No	No
Other	-	-	BLM Air Tanker Base	-	-	BLM Air Tanker Base	-	Cal Fire Air Tanker Base

1.3 Aviation Interview Summary Results

Data presented in **Section 1.1** and **Section 1.2** comes from third parties. Although the data sources are reputable, the information provided lacks first-hand anecdotal information which is necessary to develop a comprehensive understanding of what drives demand at TRK. First-hand information comes from interviews with key tenants and airport users described in this section, and surveys described in **Section 1.4**. Eleven interviews were conducted with key tenants based at TRK and transient users. A broad list of key tenants and airport users was provided by TRK management, and those interviewed were randomly selected. The individuals or companies interviewed were specifically selected to gain a better understanding of the reasons for using TRK and ultimately understanding the underlying drivers of demand there. The interview questionnaire is presented in **Appendix B**.

In order to protect respondent confidentiality, interview summaries are presented in aggregate and individual comments are not attributed to those who made them. General characteristics of the five interviewees based at TRK include the following.

- Interviewees are local residents (primary residence within 45 minutes of the Airport), or have vacation/second homes in the area.
- Interviewees have varying experience at TRK, with the shortest being based for one year and the longest being based for 40 years.
- Some interviewees have private hangars for one aircraft, and others share a hangar or own more than one aircraft.

General characteristics of the five interviewees that are transient users of TRK include the following.

- One is a Part 135 aircraft charter operator based at San Carlos Airport that uses the Airport regularly.
- One is a contract pilot for an aircraft owner based at Livermore Airport that uses TRK on a weekly basis.
- The others are fractional aircraft operators (Flexjet, Flight Options and NetJets) that use the Airport on a regular basis

A. General Feedback

The general consensus provided by each interviewee is that TRK is a quality facility that is well operated. The primary reason for basing aircraft there is almost exclusively driven by location – being close to the aircraft owners home (or second home) and business. Further, interviewees indicated the location of TRK is great – citing close proximity to recreational areas and resort facilities associated with the Truckee-Tahoe region.

More specific feedback indicated that the FBO line services meet and/or exceed customer desires. However, one respondent suggested that line services would be better and more affordable if competition were allowed to occur at TRK. The non-aviation community facilities (park, restaurant, aircraft viewing area, etc.) were also highly rated among interviewees with several citing the airfield webcam as a benefit to TRK. Interviewees gave positive feedback regarding the administration and offered praise for effectively balancing the sometimes competing interest of the flying and the non-flying public.

B. Additional Services/Facilities to Increase/Enhance Operations

Though all respondents are generally satisfied with the maintenance, repair and operation services, many believe certain measures could be undertaken to increase safety. The lack of aircraft deicing services is the most commonly mentioned, as the most desired service by itinerant operators to enhance the safe operation of TRK. The based tenants interviewed park their aircraft in hangars so the lack of deicing services is not a direct impact. Based tenants understand that there is an underlying concern from some residents in the local community that deicing services may increase operations. However, the based tenants indicate that the safety enhancements of deicing services outweigh concerns for increased operations.

There is general support for the construction of a large hangar development for the benefit of Airport users. Several interviewees support this proposed development for safety reasons as it may allow itinerant aircraft to store aircraft overnight during icing conditions. Additional elements relating to increased safety identified by the respondents include extending Runway 2/20 for use during crosswind conditions and implementing a vertically guided instrument approach. Along with increasing safety, several respondents indicated that a vertically guided instrument approach would reduce aircraft delays during adverse weather conditions.

C. Changes in Services/Facilities to Decrease/Impact Operations

The interviewees unanimously opposed the implementation of restrictions or impediments to flight operations, such as a mandatory nighttime curfew. The based tenants indicated that the existing noise abatement procedures are adequate, reduced noise, and supported compatibility of aviation operations with the surrounding community. Based tenants indicate the removal of fuel services would have a negative impact on their operations, and may cause them to consider moving their operation elsewhere or reposition to another airport.

Several based tenants interviewed rely on the aircraft maintenance operator for services, and would be greatly impacted if the services were to close. One of the based tenants expressed concerns relating to the development of incompatible land uses off airport, particularly the proposed 1,000+ dwelling unit development under the primary instrument approach corridor for Runway 20 at Canyon Springs.

Airport rents and fees are other areas of concern among the interviewees. One interviewee stated “the biggest issue affecting operation is the cost of using the Airport… [TRK] is somewhat pricy and that the landing fees are ‘stiff’ for large aircraft operators. Would like to see reduced fees across the board – reduced hangar rents, landing fees and reduced fuel prices.”

D. Cost and Availability of Fuel

Interviewees were divided on how the cost of fuel impacts their operations. Some interviewees believe that the cost of fuel does not impact the frequency or operations at the Airport; however, itinerant operations correlated strongly with the price of oil, indicating otherwise. One interviewee stated “flying to another airport for cheaper gas is a big waste of time” and that the time and fuel used would negate the fuel savings. Conversely, another interviewee tankers in fuel because of the high cost of fuel at TRK. Several respondents purchased sufficient fuel for a return trip at their origin airport because prices were up to two dollars a gallon cheaper than at TRK. TTAD has observed aircraft flying to other airports to purchase fuel, which suggests that increasing the price of fuel may increase operations by some users on account of the repositioning flights.

There was a general agreement amongst the interviewees that fuel availability is important for safe operations at TRK; however, fuel can be purchased for less at other area airports. Interviewees commented that it is difficult to use the self-service fueling facility as the numbers are washed out by the sun and the card system does not recognize credit/debit cards at times.

1.4 Aviation Survey Summary

First-hand data gathered during the interviews described in **Section 1.3** are supplemented by an online questionnaire sent to based and transient users of TRK. The Based Aircraft Questionnaire and Itinerant Aircraft Questionnaire (Questionnaires) are designed to ascertain information to better assist the District in understanding the needs and perspective of TRK's current and future based and transient customers. Questions were vetted through the TTAD's Ad-Hoc advisory committee, and an independent review of two PhD professors with experience in transportation planning and analysis.

The Questionnaires were disseminated to the survey participants between July 28, 2015 and August 24, 2015. The Questionnaires were made available via a dedicated website (QuestionPro) and the link was disseminated via email to the survey participants.

The Questionnaires were distributed to 451 Airport customers (204 based aircraft customers and 247 transient aircraft customers). The based aircraft customers and email addresses were identified from the District's based hangar and tie-down customer lists. The transient aircraft customers were identified from aircraft tail numbers that frequently utilize TRK. The email addresses for the transient aircraft were collected from AMSTAT (an online, subscription based service that tracks owners and operators of turbojet and turboprop aircraft). While 332 surveys were sent to transient aircraft customers, these 332 email addresses represented only 247 unique transient aircraft customers.

A total of 76 based aircraft customers and 27 transient aircraft customers (a total of 103 surveys) were completed prior to close of the data collection period. It is important to note that the response rates are solely based on the number of emails sent and received. There is no way to confirm receipt of the survey emails sent. Further, response rates for transient aircraft customers are provided for both number of emails sent and the number of unique transient aircraft customers included in the emails.

The Based Aircraft responses were analyzed independently of the Itinerant Aircraft responses. However, in certain instances, the same question was included in both Questionnaires. In these instances, the responses from both survey groups were combined. Complete Aviation Survey questions and results are presented in **Appendix C**.

Overall, the results of the combined Questionnaires are considered statistically significant (with a 95% confidence level and a margin of error better than 5%). The table below outlines the specific results of for each category (based, itinerant, and combined).

Figure 11: Survey Response Summary

	Based Aircraft Users	Itinerant Aircraft Users	Combined
Surveys Sent	204	247 / 332	451 / 536
Response	76	27 / 27	103 / 103
Response Rate	37.25%	10.93% / 8.13%	22.84% / 19.22%
Margin of Error	4.45%	8.96% / 9.03%	4.25% / 4.34%
Confidence Level	95%	95% / 95%	95% / 95%

A. Survey Results Overview

Respondent Overview

The respondent population for each Questionnaire was analyzed in a number of areas to help the research team understand the type of aircraft used, operating structure, and relationship to the Truckee/Tahoe area. Of based aircraft respondents, 75 percent own/operate piston single and multi-engine aircraft, while the 60 percent itinerant aircraft respondents own/operate jet aircraft. Regardless of the type of aircraft, 83 percent of based and itinerant aircraft respondents operate their aircraft for personal (non-commercial) use. Distinction must be made that 83 percent of respondents do not represent 83 percent of operations – and more than 17 percent of operations are for commercial purposes at TRK.

Combined, based and itinerant aircraft survey respondents conduct 57 percent of their operations from June to August. Based aircraft respondents were more likely to be residents, with 58 percent having a primary residence in the Truckee/Lake Tahoe area, while 34 percent of itinerant aircraft respondents have a primary residence in the local area. Of all the respondents that own a primary residence in the Truckee/Lake Tahoe area, 93 percent of these homes are within 20 miles of TRK.

Preferred Airport

In an effort to understand the overall standing of TRK within the local area, respondents were asked to identify the preferred airport when visiting the Truckee/Lake Tahoe area. Additionally, the based aircraft location of each respondent was analyzed.

TRK is the preferred airport for 90 percent of 27 itinerant aircraft respondents, and 10 percent preferred RNO.

Of the 76 based aircraft respondents, 50 percent do not have their aircraft permanently based at TRK, meaning that they move it elsewhere for part of the year. Of the remaining 38 respondents, 35 use TRK for permanent aircraft storage and three are on an Airport-maintained wait list for aircraft storage.

For those based aircraft respondents that are permanently based at other airports, 64 stated that they prefer to store their aircraft in box and T-hangars. The survey found that 17 of the based aircraft respondents are on the TTAD-maintained wait list for aircraft storage and 13 of the 17 respondents are waiting for a box hangar. **This shows that there are users who will operate at TRK even when their preferred type of aircraft storage is not available, which suggests that there are draws outside of airport facilities driving users to the region.**

Respondents were asked about what other airports they considered before ultimately selecting TRK. There was no one airport that appeared to be most commonly considered in the selection process, with responses split between South Lake Tahoe Airport (12 percent), Minden-Tahoe Airport (14 percent), Reno-Tahoe International Airport (14 percent), Carson Airport (15 percent), and Reno/Stead Airport (16 percent).

Airport Proximity

In general, the location of an airport is a significant driver in demand. However, the Questionnaires were designed to help the research team understand the significance of this driver along with the ultimate destination of airport users.

A significant majority (90% combined) of based and itinerant aircraft respondents determined that the Airport's proximity to their local residence is very important, with 63% of based aircraft respondents stating it was an absolute necessity. A small majority (52% combined and 53% combined) of based and itinerant aircraft respondents identified the proximity of TRK to Lake Tahoe and local resorts as very important to an absolute necessity.

Figure 12: Airport Proximity Sensitivity

Proximity Analysis	Very Important	Absolute Necessity
Local residence		
Based	32%	63%
Itinerant	50%	23%
Combined	37%	53%
Local Business/Customers		
Based	13%	20%
Itinerant	31%	15%
Combined	18%	19%
Lake Tahoe		
Based	24%	26%
Itinerant	48%	8%
Combined	30%	22%
Local Ski Resorts		
Based	31%	20%
Itinerant	52%	8%
Combined	36%	17%

Airport Amenities

The Questionnaires were designed to allow the research team to understand what amenities at TRK supported additional user demand. The results of the specific amenity (e.g., General Aviation Terminal, availability of aircraft storage, and pricing) varied between the based aircraft respondents and the itinerant aircraft respondents.

While 60 percent of itinerant aircraft respondents considered the General Aviation Terminal very important to an absolute necessity, only 39 percent of based aircraft respondents considered this very important to an absolute necessity. Conversely, 89 percent of based aircraft respondents considered availability of aircraft storage to be very important to an absolute necessity while only 32 percent of itinerant aircraft respondents considered this very important to an absolute necessity.

Aircraft storage pricing was very important to an absolute necessity for 76 percent of based aircraft respondents. However, only 12 percent of itinerant aircraft respondents considered aircraft storage pricing as very important to an absolute necessity. This response pattern suggests with expectations that airport users who do not base their aircraft at TRK are less concerned about hangar rental rates than those that do.

Figure 13: Airport Amenity Sensitivity

Airport Amenities	Very Important	Absolute Necessity
General Aviation Terminal		
Based	29%	10%
Itinerant	48%	12%
Combined	34%	11%
Aircraft Storage (availability)		
Based	36%	53%
Itinerant	24%	8%
Combined	33%	41%
Aircraft Storage (pricing)		
Based	40%	36%
Itinerant	8%	4%
Combined	32%	28%

Airport Attributes

Respondents identified the most important airport facilities and services, and commented on how changes to facilities and services would increase or decrease their use of TRK. The facilities and services identified by more than 50 percent of the survey respondents as “very important” or “an absolute necessity” are identified below. The following Airport attributes identified by more than 50 percent of respondents as very important to an absolute necessity are identified below.

Figure 14: Airport Attributes

Airport Attribute	Based Aircraft Survey Respondents	Itinerant Aircraft Survey Respondents
Runway		
Runway Length	< 50%	68%
Runway Width	< 50%	56%
Runway Weight Bearing Capacity	< 50%	56%
Tower/Instrument Procedures		
Approach Procedures	< 50%	68%
Departure Procedures	< 50%	68%
Airport Services		
Full Service Fueling (Availability)	< 50%	67%
Self Service Fueling (Availability)	54%	--
Fuel Service (Pricing)	59%	56%
Snow Removal Capabilities	71%	72%

The following identifies the percent of respondents that indicated the implementation of the associated airport attribute would result in a 20 percent (or more) increase in aircraft operations at TRK. For example, 35 percent of itinerant aircraft survey respondents indicated that an increase to the runway length would result in more than a 20 percent increase in aircraft operations.

Figure 15: Airport Attribute Changes That Would Increase Operations

Airport Attribute Change	Based Aircraft Survey Respondents	Itinerant Aircraft Survey Respondents
Runway		
Increased Runway Length	6%	35%
Increased Runway Width	6%	27%
Tower/Instrument Procedures		
Tower Controller during Peak Periods	24%	50%
Availability of Clearance Delivery	31%	56%
Enhanced IFR Approach Procedures	42%	80%
Enhanced IFR Departure Procedures	37%	80%
Airport Services		
Aircraft Deicing Services/Equipment	25%	80%
Aircraft Hangar for Pre-heat/Deicing	N/A	76%
Decrease in Jet A Pricing		
10% decrease	N/A	21%
20% decrease	N/A	48%
30% decrease	N/A	50%
40% decrease	N/A	58%
50% decrease	N/A	63%
Decrease in Itinerant Use Fee		
10% decrease	N/A	25%
20% decrease	N/A	33%
30% decrease	N/A	38%
40% decrease	N/A	42%
50% decrease	N/A	42%
N/A = Specific question was not asked to this respondent group.		

The following table identifies the percent of respondents that indicated the implementation of the associated Airport attribute would result in a 20 percent (or more) decrease in aircraft operations at TRK. For example, 30 percent of based aircraft survey respondents and 71 percent of transient aircraft survey respondents indicated that a decrease to the runway length would result in more than a 20 percent decrease in aircraft operations.

Figure 16: Airport Attribute Change That Would Decrease Operations

Airport Attribute Change	Based Aircraft Survey Respondents	Itinerant Aircraft Survey Respondents
Runway		
Decreased Runway Length	30%	71%
Decreased Runway Width	27%	68%
Decreased Runway Weight Bearing Capacity	10%	60%
Airport Services		
Full Service Fueling Only	39%	36%
Self Service Fueling Only	28%	44%
No Fueling Services	68%	64%
Elimination of Aircraft Towing	22%	32%
Elimination of Ground Power	22%	36%
Elimination of Start Carts	16%	32%
Elimination of Lavatory Services	19%	28%
Elimination of Aircraft Maintenance & Repair	50%	36%
Elimination of ARFF (Capabilities)	17%	40%
Elimination of Snow Removal (Capabilities)	71%	84%
Elimination of On-Airport Restaurant	34%	28%
Increase in Jet A Pricing		
10% increase	N/A	25%
20% increase	N/A	42%
30% increase	N/A	50%
40% increase	N/A	58%
50% increase	N/A	58%
Increase in Itinerant Use Fee		
10% increase	N/A	42%
20% increase	N/A	46%
30% increase	N/A	58%
40% increase	N/A	67%
50% increase	N/A	65%
N/A = Specific question was not asked to this respondent group.		

The results of the sensitivity analysis show what types of changes TTAD can implement that may increase or decrease use of TRK. The most important items that would grow traffic include better instrument procedures, aircraft deicing services or availability of a hangar for deicing, and cheaper fuel. Runway dimensions appear to be adequate for most users. Conversely, decreasing runway length could have a significant impact on itinerant operators, as would the elimination of fuel services and the significant increase in fuel pricing and itinerant use fees.

2. NON-AVIATION DEMAND DRIVERS

Non-aviation demand drivers focus on variables and circumstances outside of the realm of the general aviation industry. The research approach includes quantitative assessment of the performance of demand driver variables over time, and a qualitative assessment of user preferences and opinions through interviews. The result of the non-aviation demand driver analysis is an assessment of what activities and features outside of the Airport drive demand at TRK and how changes to these activities and features might influence future activity.

2.1 Non-Aviation Demand Influencer Research Results

Research on non-aviation demand drivers focuses on potential demand influencers outside of aviation that might impact activity levels at TRK. Non-aviation demand drivers can be thought of as reason why people live in or travel to the region. Areas of investigation include the local real estate market, factors that drive recreational visits, and national economic prosperity that support expenditure on general aviation as a method of travel. Analysis focuses on how fluctuations of demand driver variables are reflected in the activity levels at TRK. Results show that non-aviation demand influencers play a major part in why people come to the Airport.

A. Research Approach

Analysis of demand influencers considers ten years of historical data (for the January 1, 2005 to December 31, 2014 period) and provides an analysis of how Airport activity levels have correlated with the historical demand influencer data sets. A map of the study area used for data analysis is included in **Figure 17**. Analysis is done at the annual level, using the calendar year. Annual data is chosen to smooth out seasonal peaking that may occur at certain times of the year in the demand influencer data sets which could lead to variables appearing more or less correlated than they should. The following data sets are analyzed to determine correlation with activity levels at TRK.

Socioeconomic Data[6]

- Households
- Population
- Median Age
- Average Household Income
- Median Household Income

Residential Housing Units

- Total Units
- Unit Sales (All, Greater than $1M, New, New Greater than $1M)

Visitor Spending (millions)

Itinerant Occupancy Tax Revenue (NLTRA[7] & Town of Truckee)

Average Crude Oil Spot Price (Cushing, Oklahoma)

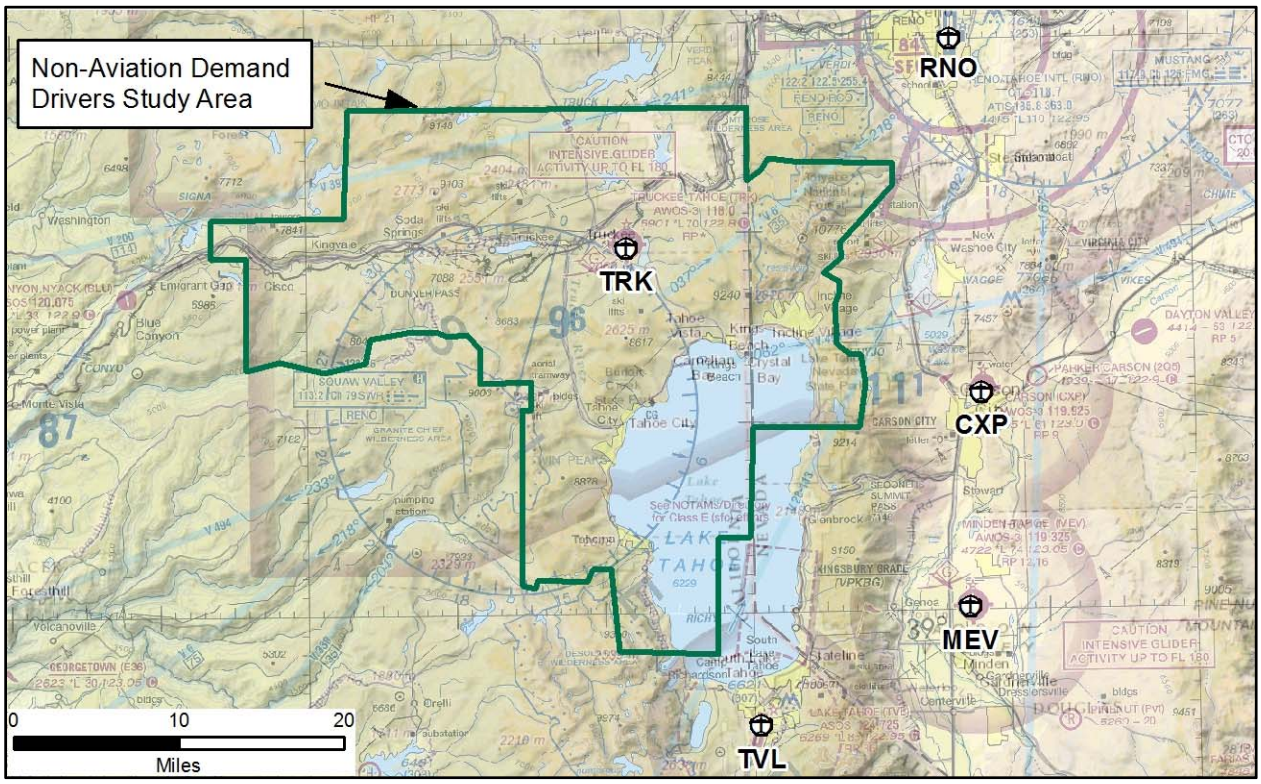
United States Gross Domestic Product – GDP (billions)

S&P 500 Average Close

Truckee Sales Tax (Base)

[6] Estimated Data is based on Census data (2000, 2010, 2015 estimate), and used a linear estimation model for the gap years.
[7] North Lake Tahoe Resort Association

Figure 17: Non-Aviation Demand Driver Study Area



B. Research Methodology

Research methodology for the non-aviation demand influences is the same as what is employed for the aviation demand influencers, described in **Section 1.1.B**. Analysis correlates the variables over a period of ten years, and produces a correlation coefficient, a measure of how proportionally the two variables change from year to year.

C. Research Results

The correlation analysis returns a correlation coefficient for each variable. In order to derive which variables require further investigation, the following criteria were applied.

- r = 0.30 – 0.49 (highlighted in yellow) indicates a moderate positive correlation
- r = 0.50 and above (highlighted in green) indicates high positive correlation

Variables with correlation coefficients less that r = 0.30 were considered to be weakly correlated or negatively correlated, and were not retained for further analysis. Results of the correlation analysis for based aircraft are included in **Figure 18**, and results for itinerant operations are included in **Figure 19.**

Figure 18: Based Aircraft Correlation Analysis Results

Truckee Tahoe Airport Correlation Analysis (Based Aircraft)											
Demand Influencers	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TREND CC
Based Aircraft (Total)	233	233	233	233	233	234	223	218	214	212	N/A
Residential Housing Units											
Unit Sales (All)	2,841	1,795	1,529	1,128	1,274	1,515	1,562	1,871	2,266	1,958	-0.32
Unit Sales (Greater than $1M)	419	354	314	216	134	181	131	182	310	361	-0.08
Unit Sales (Greater than $5M)	8	17	11	7	3	10	5	8	18	14	-0.38
Unit Sales (Greater than $10M)	1	N/A	1	N/A	N/A	2	N/A	3	1	2	-0.33
Unit Sales (New)	265	158	204	114	52	55	30	17	42	61	0.57
Unit Sales (New Greater than $1M)	24	41	57	36	3	N/A	N/A	N/A	6	20	0.47
Total Units	41,183	41,341	41,545	41,659	41,711	41,766	41,796	41,813	41,855	41,916	-0.67
Estimated Data											
Households	16,512	16,604	16,697	16,790	16,882	16,975	17,143	17,311	17,478	17,646	-0.93
Population	40,719	40,740	40,761	40,782	40,803	40,824	41,349	41,874	42,398	42,923	-0.98
Median Age	40	40	40	40	40	40	41	41	41	42	-0.98
Average Household Income	$82,298	$82,665	$83,033	$83,400	$83,768	$84,135	$85,178	$86,221	$87,263	$88,306	-0.96
Median Household Income	$61,001	$61,735	$62,469	$63,204	$63,938	$64,672	$64,810	$64,949	$65,087	$65,226	-0.71
Population (Census)	N/A	N/A	N/A	N/A	N/A	16,164	16,171	16,122	16,144	16,297	-0.36
Visitor Spending (Millions)	$355	$383	$386	$405	$411	$464	$486	$487	$509	$530	-0.87
TOT Revenue (NLTRA)	$7,362,800	$7,047,600	$6,632,300	$7,432,700	$8,598,300	$9,558,700	$9,976,900	$10,629,200	$11,462,500	$11,840,600	-0.89
TOT Revenue (Truckee)	$1,070,400	$1,300,000	$1,342,300	$1,433,700	$1,339,900	$1,433,700	$1,450,900	$1,520,200	$1,827,900	$1,959,000	-0.86
Average Crude Oil Spot Price	$56.49	$66.02	$72.32	$99.57	$61.65	$79.40	$94.87	$94.11	$97.91	$93.26	-0.67
United States GDP (Billions)	$13.10	$13.90	$14.50	$14.70	$14.40	$15.00	$15.50	$16.20	$16.80	$17.40	-0.91
S&P 500 Average Close	1,208	1,318	1,478	1,215	946	1,131	1,281	1,387	1,652	1,944	-0.79
Truckee Sales Tax (Base)	$2,889,900	$3,297,000	$3,453,000	$3,520,000	$2,664,000	$2,530,000	$2,868,000	$2,869,000	$3,086,000	$3,457,000	-0.15

Figure 19: Itinerant Operations Correlation Analysis Results

Truckee Tahoe Airport Correlation Analysis (General Aviation Itinerant Operations)											
Demand Influencers	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TREND CC
General Aviation Itinerant Operations	10,213	14,307	15,618	11,031	14,908	15,533	15,398	15,863	16,729	17,875	N/A
Residential Housing Units											
Unit Sales (All)	2,841	1,795	1,529	1,128	1,274	1,515	1,562	1,871	2,266	1,958	-0.13
Unit Sales (Greater than $1M)	419	354	314	216	134	181	131	182	310	361	-0.18
Unit Sales (Greater than $5M)	8	17	11	7	3	10	5	8	18	14	0.37
Unit Sales (Greater than $10M)	1	N/A	1	N/A	N/A	2	N/A	3	1	2	0.36
Unit Sales (New)	265	158	204	114	52	55	30	17	42	61	-0.64
Unit Sales (New Greater than $1M)	24	41	57	36	3	N/A	N/A	N/A	6	20	-0.21
Total Units	41,183	41,341	41,545	41,659	41,711	41,766	41,796	41,813	41,855	41,916	0.74
Estimated Data											
Households	16,512	16,604	16,697	16,790	16,882	16,975	17,143	17,311	17,478	17,646	0.77
Population	40,719	40,740	40,761	40,782	40,803	40,824	41,349	41,874	42,398	42,923	0.68
Median Age	40	40	40	40	40	40	41	41	41	42	0.69
Average Household Income	$82,298	$82,665	$83,033	$83,400	$83,768	$84,135	$85,178	$86,221	$87,263	$88,306	0.75
Median Household Income	$61,001	$61,735	$62,469	$63,204	$63,938	$64,672	$64,810	$64,949	$65,087	$65,226	0.74
Population (Census)	N/A	N/A	N/A	N/A	N/A	16,164	16,171	16,122	16,144	16,297	0.76
Visitor Spending (Millions)	$355	$383	$386	$405	$411	$464	$486	$487	$509	$530	0.77
TOT Revenue (NLTRA)	$7,362,800	$7,047,600	$6,632,300	$7,432,700	$8,598,300	$9,558,700	$9,976,900	$10,629,200	$11,462,500	$11,840,600	0.70
TOT Revenue (Truckee)	$1,070,400	$1,300,000	$1,342,300	$1,433,700	$1,339,900	$1,433,700	$1,450,900	$1,520,200	$1,827,900	$1,959,000	0.75
Average Crude Oil Spot Price	$56.49	$66.02	$72.32	$99.57	$61.65	$79.40	$94.87	$94.11	$97.91	$93.26	0.38
United States GDP (Billions)	$13.10	$13.90	$14.50	$14.70	$14.40	$15.00	$15.50	$16.20	$16.80	$17.40	0.78
S&P 500 Average Close	1,208	1,318	1,478	1,215	946	1,131	1,281	1,387	1,652	1,944	0.57
Truckee Sales Tax (Base)	$2,889,900	$3,297,000	$3,453,000	$3,520,000	$2,664,000	$2,530,000	$2,868,000	$2,869,000	$3,086,000	$3,457,000	-0.03

D. Findings

The following non-aviation demand influencers were found to have the strongest correlation with aviation demand at TRK in the period considered. Itinerant operations show more variables with a strong correlation to non-aviation demand drivers than do based aircraft.

- Total Residential Housing Units
- Number of Households
- Population
- Median Age
- Average Household Income
- Median Household Income
- Visitor Spending
- Total Revenue
- Average Crude Oil Spot Price
- U. S. Gross Domestic Product (GDP)
- S&P 500 Average Close

The core question of this analysis is "Which of these non-aviation demand influencers are demand drivers?" The results presented above help direct further research into what is driving demand for aviation activity at TRK, but correlation analysis alone cannot answer this question. For this reason, analysis includes a market assessment in **Section 2.2**, which provides additional information.

Correlation suggests (but does not outright confirm) that activity at TRK grows and declines with various external factors: housing units sold, the number of households, population, household income, visitor spending, revenue, the price of oil, and U.S. GDP.

This means that activity at TRK generally grows and declines in proportion with these socioeconomic factors. As the area experiences growth in homes, population, income and tourist spending, operations at TRK will increase. Likewise, as national and global factors increase, such as the price of oil, the U.S. GDP and the S&P 500, activity at TRK will increase. These local and global factors are generally out of the control of TRK or TTAD.

The correlation analysis suggests that TRK does not drive demand in the local area, but is instead responding to it. Itinerant operations grew from 2005 to 2007, then declined in 2008 when the real estate bubble burst. Itinerant operations returned to pre-recession levels in 2012, similar to the "Unit Sales (All)" variable, although this variable experienced a more pronounced pre-recession decline. The sample size for the "Unit Sales (>$1M)" variable is less than one percent of "Unit Sales (All)" for a given year, on average, which makes it less useful for reporting trends although conventional wisdom suggests that purchasers of homes greater than $1M may be more likely to come to the area by plane than purchasers of less expensive homes. Parallels can be drawn between the absence of "Unit Sales (>$1M)" and the flat post-recession trend of itinerant operations, which shows itinerant operations remaining somewhat unchanged until the more expensive homes began selling again.

The results of the correlation analysis suggest that changes in aviation activity at TRK is not an anomaly, nor is it counter to regional and national socioeconomic trends. Activity seems to respond more strongly to what is occurring in the community surrounding TRK, which is explored in more detail in the following section.

2.2 Non-Aviation Market Assessment

Analysis of non-aviation demand drivers included collection perceptions and opinions of local business, tourism and real estate sector leaders. Between September 28 and October 7, 2015, discussion occurred with 15 local leaders plus operations staff at the Airport to understand their perspective on the topics related to demand drivers of aviation at TRK. The discussions focused on the local leader's perceptions of what brings customers and constituents to the region, how they get to the area, along with perceived trends, influences and predictions for future Airport use.

Interviewees represented Chase International, Martis Camp, Oliver Real Estate, the Truckee Donner Chamber of Commerce, Tahoe Mountain Club, Town of Truckee, and Resort at Squaw Creek, Glenshire Devonshire Residents Association, Lahontan Community Association, Sugar Bowl Ski Resort, Mountain Area Preservation, Incline Village Visitors Association, North Lake Tahoe Resort Association, Carr Long Real Estate and Mountainside Partners. On-the-ground TRK operations staff were also interviewed to give their thoughts on constituents using the Airport. The following questions were asked:

- Who their constituency or customer base is?
- Why they visit the Truckee/Tahoe region?
- How they get to the area?
- If their constituency use TRK?
- If their constituency use TRK more or less than 10 years ago, what has driven that trend (internal or external to TTAD)
- What might drive an increase or decrease in operations at TRK in the future?

The following is a summary of answers to these questions. More detail is presented in **Appendix D**.

A. Constituency or Customer Base

Interviewees were asked to define their customer base. Answers ranged from tourists (at the Resorts) to second homeowners. Second homeowners were a popular answer with the real estate associations. Another caveat to this answer was that the second homeowners were primarily from the Bay Area and ranged from young families, to retirees. It should be noted that respondents made the point that these families are also perceived to be affluent.

Whether or not an interviewee perceived high or low usage of TRK by their customers or constituents was generally tied to affluence, although some affluent communities didn't report as high aviation use as others. For those who represented largely visitor and second homeowner groups, most said the majority of their constituents or customers came from the Bay Area.

B. Visitors to the Truckee-Tahoe Region

When asked what brought their customers or constituents to the Truckee-Tahoe region, recreation and mountain lifestyle were the most common answers, along with proximity to the Bay Area and ease of access to the region. Additional answers include, having a second home in the area, skiing and golf.

C. Access to the Area

Asked to estimate how their constituents travel to the Truckee-Tahoe region, flying to the area was a significant response. As expected, driving to the area dominates how people arrive to these resorts and home associations. However, it is estimated that up to 40 percent of Martis Camp constituents use TRK (almost 25 percent exclusively). Sugar Bowl, Lahontan and Tahoe Mountain Club estimate that 10-25 percent use TRK, while other associations put 5-10 percent of constituents flying into TRK to access the area.

Perceived changes in their constituency's use of TRK varied, with some indicating an increase in use. Martis Camp estimated the completion of homes has directly resulted in an increase of activity at TRK, and others estimate the increase in jet activity while propeller activity has decreased.

D. What has Driven Demand Recently?

For those interviewees who saw an increase in Airport use, nine cited external factors – growth in the luxury real estate product, improvements in the economy, especially the Bay Area, national and international exposure of the Truckee/Tahoe area as a destination, events, and an increase in fractional aviation options.

Few perceived factors internal to, or under the control of TTAD as influencing their constituents or customers' use of TRK. Some perceived services like NetJets and Surf Air as being more prominent at TRK and bringing second homeowners and visitors to the Truckee/Tahoe area.

Interviewees stated that future aviation influences at TRK would continue to be external, or out of the control of TTAD: discussing weather, economy, real estate and recreational assets as factors influencing growth in the region and operations at TRK. The general sentiment was "as long as the economy (tourism, real estate, and overall) continues to grow, aviation use will increase."

E. Conclusions

The Truckee-Tahoe region has recently seen an increase in tourism and homeowners. People who visit the area want to enjoy the mountain lifestyle. In the summer this includes Lake Tahoe, and other outdoor activities. In the winter this primarily includes skiing. Year-round, the area offers an escape from the crowded Bay Area, where most constituents live and work.

People who visit the area access it primarily by driving. However access by aircraft, particularly at TRK, is a significant portion with some associations seeing 5-10 percent of constituents using the Airport on a regular basis. Some associations see up to 25 percent of homeowners using TRK.

Additionally, future residential and report projects that are slated for development (Truckee Railyard, Tahoe Biltmore) are likely to bring in similar clientele, and likely add to aviation demand at TRK.

The lifestyle of the area seems to be the primary driving factor. Affluent people have chosen to build homes here or visit the area on a regular basis. These people have the option to fly into the area and utilize TRK when doing so. The cost of chartering a private aircraft or owning an aircraft is not outside their means. Few perceived factors internal to, or under the control of TTAD as influencing their constituents or customers' use of TRK. Some perceived services like Net Jets and Surf Air as influences that are under the control of TTAD that are increasing operations, especially jets. However, TTAD cannot legally prohibit these users from operating at TRK as a condition of the federal funds that the Airport has received.

3. DEMAND DRIVERS STUDY SUMMARY AND CONCLUSIONS

Research into the demand drivers at TRK shows that the Airport's location and surrounding environs (e.g. real estate, recreation opportunities, and proximity to affluent Bay Area) have a greater influence on demand than does the Airport itself.

Aviation demand driver correlation analyses show that activity at TRK perform in line with national trends. The Airport is not an anomaly in the aviation industry, and is subject to the same periods of growth and decline as surrounding airports and the national airspace system as a whole. Non-aviation demand driver correlation analyses show that itinerant operations at TRK are highly correlated to the local real estate market and overall economic health. Interviews with aviation and non-aviation stakeholders indicate that the underlying reason behind this correlation is that TRK is located in a desirable community where people want to live, vacation, and recreate.

The sensitivity analyses show that there are on-airport measures that can be taken to influence operations to some degree; however, interviewees have suggested that there are ways around some of these. Some users already find the price of fuel too high, so they purchase sufficient fuel to get back to their airport of origin and skip fueling at TRK entirely. This means that perceived high fuel prices may not impact activity, but instead reduce fuel sales and, by association, airport revenue. This may also mean that some additional activity is generated by aircraft 'repositioning' to refuel.

TRK offers similar facilities to several of the other airports in the study area, and Carson, Lake Tahoe, and Minden-Tahoe enjoy similar lakeside proximity. As a result, operations and based aircraft are relatively well distributed around the region, with the exception being Lake Tahoe Airport which has limited aircraft storage space.

The key takeaways from this analysis are as follows:

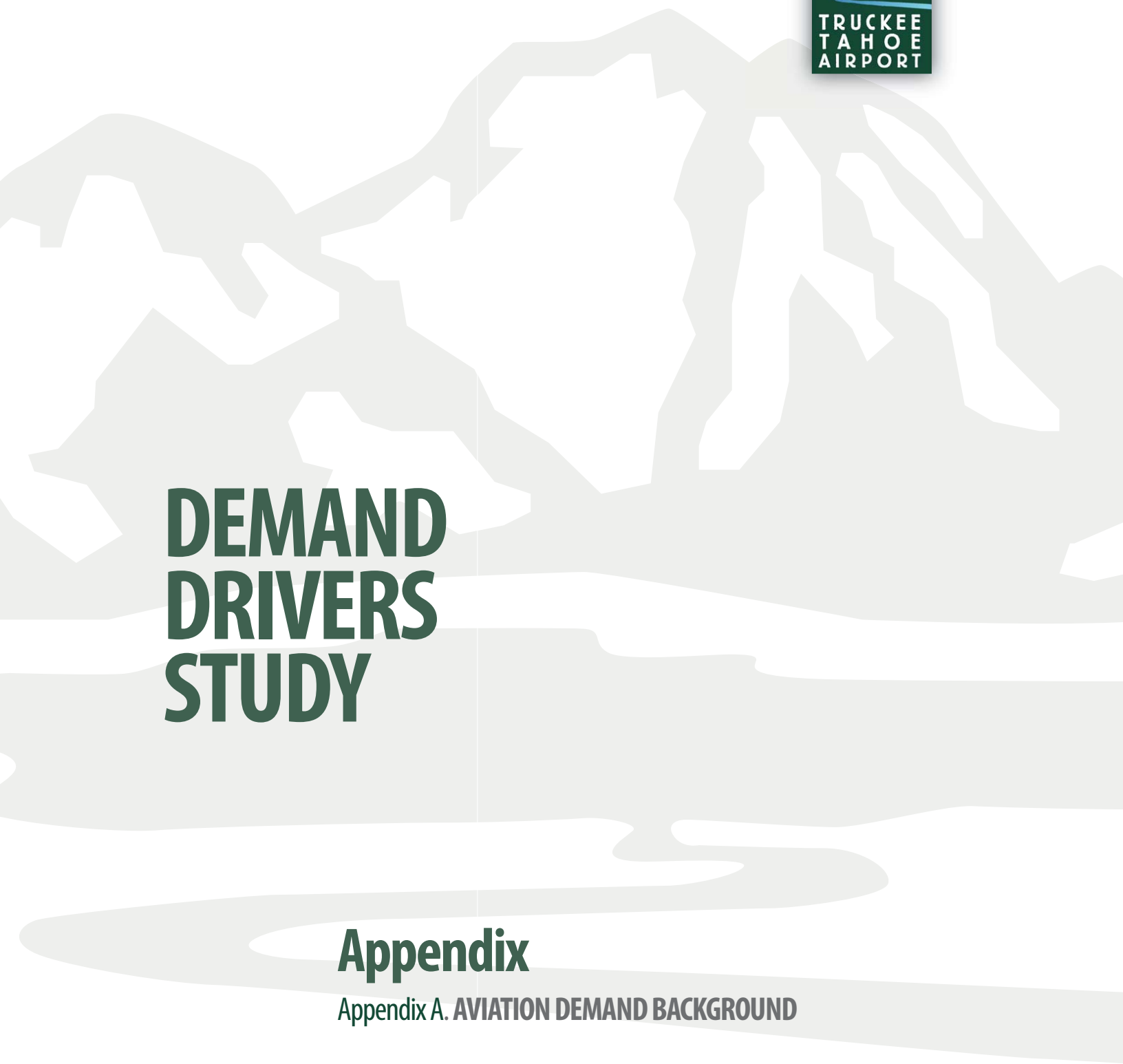
- The most important reason for using the Airport is proximity to where the passengers and pilots want to go, be it recreational or residential.
- Aviation activity in the region is not spread evenly across the airports, and TRK sees less traffic than five of the seven airports studied.
- Aircraft operations at TRK perform in line with national trends, suggesting that demand is driven by factors impacting the region and the County, not only the local level. If people are flying and they want to go somewhere near TRK, then they chose to operate at TRK.
- Survey responses show that there are changes to pricing and service availability that could incentivize or disincentive use of the Airport.

There are measures and programs that the Airport can put in place to influence use of TRK; however, given the TTAD's legal obligation to operate the Airport for users of the National Airspace System and the desirable area that the Airport is located in, it is expected that TRK will continue to see a similar level of activity into the future. Long-term economic downturn or decline of the tourist industry in the region will have a greater impact on activity levels at TRK than instrument procedures and aircraft storage facilities.

DEMAND DRIVERS STUDY

Appendices

DEMAND DRIVERS STUDY



DEMAND DRIVERS STUDY

Appendix

Appendix A. **AVIATION DEMAND BACKGROUND**

Appendix A. AVIATION DEMAND BACKGROUND

A.1 General Aviation Industry Overview

This section provides an overview of the general aviation industry (with primary emphasis on general aviation airports and the general aviation service industry). The aviation industry can be segmented into three primary areas:

- Air carriers – includes scheduled and unscheduled passenger and cargo airlines
- Government (military) – includes federal, state, and local (county and city) agencies and all branches of the military
- General aviation – includes all aviation with the exception of air carriers and government

General aviation is estimated to be a $40 billion a year industry which generates more than $150 billion in economic activity. While 75% of major airline flights operate out of less than 50 major metropolitan airports, only about 420 airports (out of 650 United States airports certified for scheduled airline service) have scheduled airline service – these airports are also used by general aviation. In contrast, there are more than 19,000 landing facilities in the United States that are used exclusively by general aviation of which about 5,200 airports are available for public use. Some key general aviation statistics follow:

- Over 220,000 general aviation aircraft (approximately 95% of all aircraft) are flying in the United States today
- In the United States, general aviation aircraft fly over 27 million hours (nearly two times airline flight hours) and carry 166 million passengers annually
- General aviation and related activities employ more than 1.2 million people who collectively earn approximately $53 billion annually

A. Airports

Communities across the United States depend on general aviation airports to facilitate air transportation, which both builds and sustains local economies. While general aviation airports support a full range of activities including such important public services as medical transport, law enforcement, fire protection, etc., perhaps the most important role of general aviation airport is to provide business access to the community.

B. Aviation Service Industry

Air transportation services and/or aircraft ground services are provided by Fixed Base Operators (FBOs) and Specialized Aviation Services Operators (SASOs). FBOs are defined as a commercial operator engaged in the sale of products and services and the renting or subleasing of facilities consistent with an airport's minimum standards for commercial aeronautical activities. A SASO is defined as a commercial operator that provides any one or a combination of the following activities: aircraft maintenance, avionics or instrument maintenance, aircraft rental or flight training, aircraft charter or aircraft management, aircraft sales, and other commercial aeronautical activities consistent with an airport's minimum standards for commercial aeronautical activities.

At this time, it is estimated that there are approximately 3,400 FBOs and in excess of 20,000 SASOs in operation in the United States at airports having a paved runway of 3,000 feet or more. The 3,000 foot runway length is important as it is normally recognized as the minimum runway length required to accommodate the majority of general aviation aircraft. For higher altitude airports, however, considering the effects of density altitude, longer runways in the 5,000 to 6,000 foot range are typically required to achieve the same safety and performance parameters.

Products, Services, and Facilities

The products, services, and facilities that are offered in the general aviation marketplace have been predicated primarily on the demand created by four distinctly separate operating classifications within the marketplace – personal, business, commercial, and government. These segments are defined and briefly examined, as follows:

a. Personal

In many respects, aircraft owners and operators who have committed time and financial resources to this segment of the industry have done so because of a sheer love of aviation. The "romance factor", which has enthralled both young and old alike, is a very important element in understanding the relationship between people and flying machines.

The aircraft utilized for personal flying are typically based at general aviation airports, both public and private. For the most part, the aircraft used for personal flying are single-engine and light multi-engine piston-powered aircraft, although some larger aircraft, including turbine-powered aircraft, are also used for this purpose. According to the General Aviation Manufacturer's Association (GAMA), there were 199,972 active aircraft being used in the United States in 2013. This segment of the market is typically price oriented, seeking the best price for the service.

b. Business

The business segment of the market is viewed as integral to the long-term growth and development of the general aviation industry. As of 2013, this segment was comprised of more than 26,000 active aircraft, including over 10,000 turboprop and jet aircraft, in the United States. It is estimated that business flights make up over 18% of the 22.8 million hours flown by general aviation each year (GAMA 2014).

One of general aviation's most important roles in the economy of the United States is enhancing the profitability and competitive strength of United States companies and industries. Companies that take advantage of general aviation routinely outperform businesses relying solely on the airlines for travel. Studies have shown that, on average, Standard & Poor's 500 firms that use general aviation to transport management teams, employees, business partners, and customers earned approximately 88% more total return to shareholders than those that do not utilize general aviation (NexaAdvisors). This analysis revealed a correlation between firms utilizing general aviation aircraft and return on equity. It did not conclude that the use of general aviation aircraft increased financial performance.

While approximately 3% of general aviation aircraft are registered to Standard & Poor's 500 firms, the majority of business aircraft are operated by smaller companies. In the Business Aviation Factbook (2014), National Business Aviation Association indicates that 59% of companies operating business aircraft employ fewer than 500 employees and 70% have fewer than 1,000 employees. The business segment of the market is typically service oriented, seeking the best service for the price.

c. Commercial

Commercial aviation is a significant economic engine as it represents companies that use general aviation aircraft for commercial purposes including flight instruction, air taxi (non-scheduled, on-demand), medical transportation (air ambulance), sightseeing, aerial observation (e.g., pipeline/power-line patrol/inspection), aerial application (e.g., agriculture, photography, firefighting, etc.), cargo, and much more. This segment is comprised of more than 39,000 active aircraft. It is estimated that general aviation aircraft used for commercial purposes make up about 50% of the 22.8 million hours flown by general aviation each year (GAMA 2014). The commercial segment of the market is typically value oriented, seeking the best combination of service and price.

A.2 General Aviation Historical Statistics and Trends

For the purposes of this analysis, national general aviation trends, including general aviation new aircraft deliveries, active general aviation aircraft, general aviation hours flown, active pilots, and general aviation fuel consumption were analyzed. The key findings follow.

A. General Aviation New Aircraft Deliveries

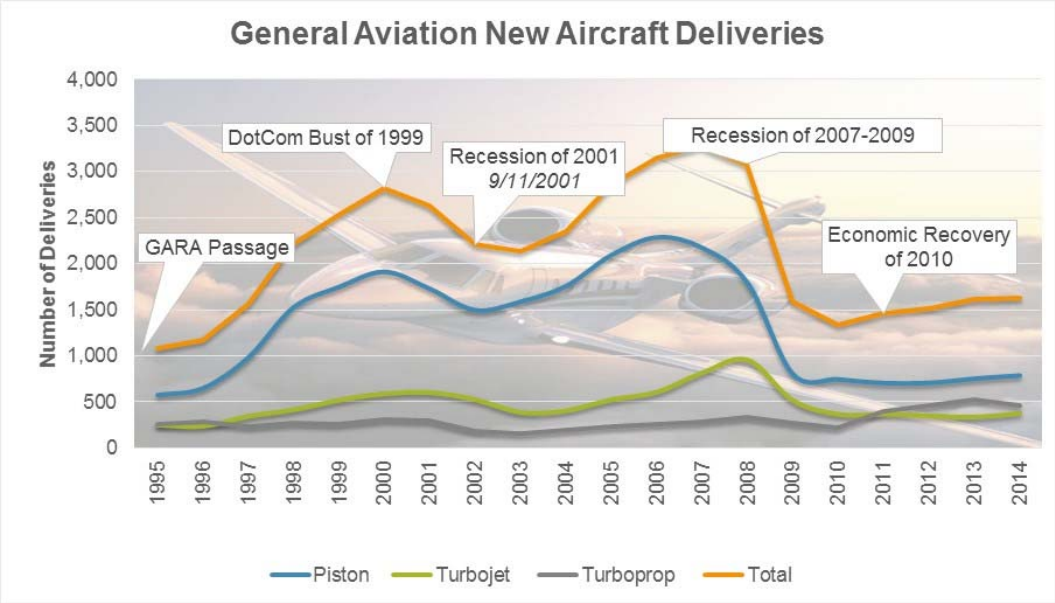
General aviation aircraft deliveries by United States manufacturers reached a high of 17,811 in 1978 and then experienced a significant decline until bottoming out in 1994 at an industry low of 929 units. The significant decline during this period can be attributed to a number of factors including:

- Increased aircraft acquisition costs (relating primarily to the rising costs associated with product liability insurance)
- Increased operating costs (insurance, maintenance, fuel, etc.)
- Implementation of the "luxury" tax in 1986 and repeal of the Investment Tax Credit
- Increased air carrier service capabilities including regional and commute carriers

Following this decline, general aviation aircraft deliveries increased from 929 annual shipments in 1994 to 3,279 annual shipments in 2007 which represents an increase of 253% or a compounded annual increase of 10.2% over the period. This significant increase was attributed to several factors, as follows:

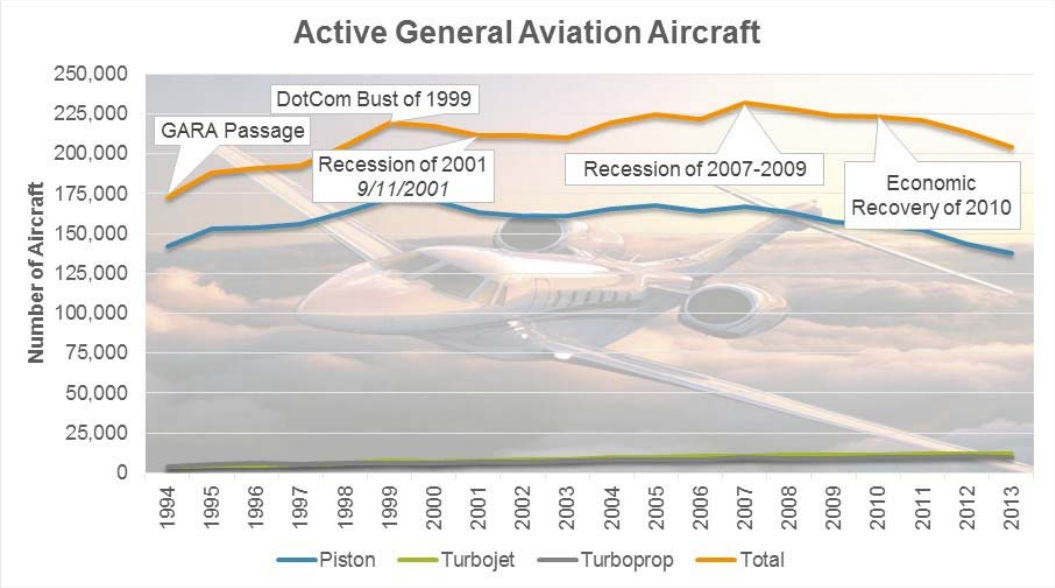
- The passage of the General Aviation Revitalization Act (GARA) in 1994 that limited the liability of aircraft and aircraft parts manufacturers to 18 years
- The proliferation of fractional aircraft ownership programs
- A strong economy during the late 1990s and early 2000s (including low interest rates)
- Entrance by new aircraft manufacturing companies
- Introduction of new aircraft technologies (e.g., composite materials and glass cockpits).

Subsequently, general aviation aircraft deliveries decreased sharply from 2007 (3,279 annual shipments) to 2010 (1,334 annual shipments) due to the economic recession. Since 2010, annual shipments have slowly increased to 1,631 annual shipments in 2014.



B. Active General Aviation Aircraft

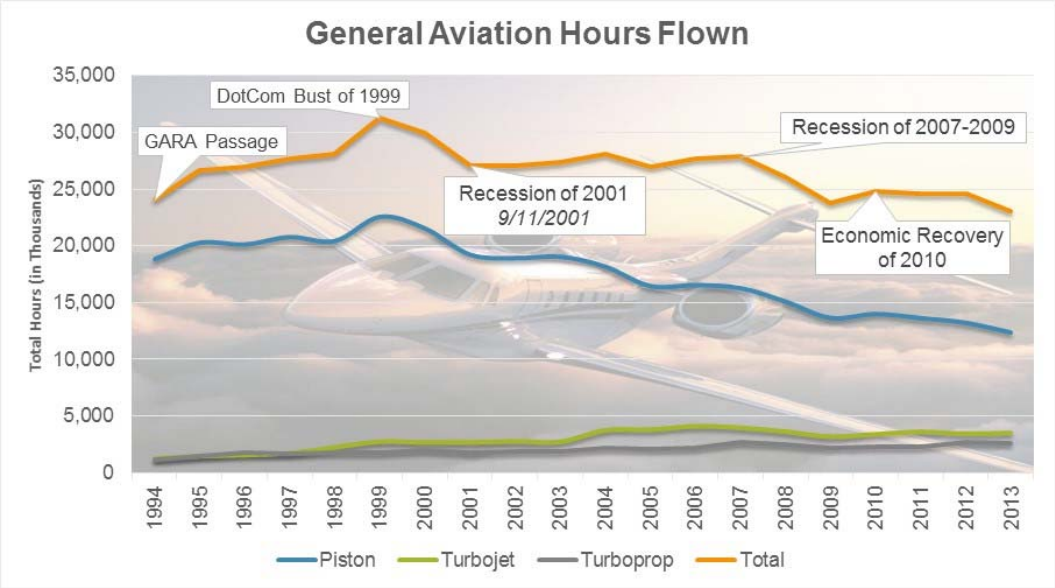
As with new aircraft deliveries, the number of active general aviation aircraft hit a low in 1994 of 172,936. Since that time, the number of active aircraft has steadily increased to 204,085 in 2013. This increase can be attributed to the growth of experimental and turbine aircraft, the resurgence of new aircraft manufacturing (i.e., the growth of new aircraft deliveries and the number of companies developing Supplemental Type Certificate programs to modify and keep the aging aircraft fleet active).



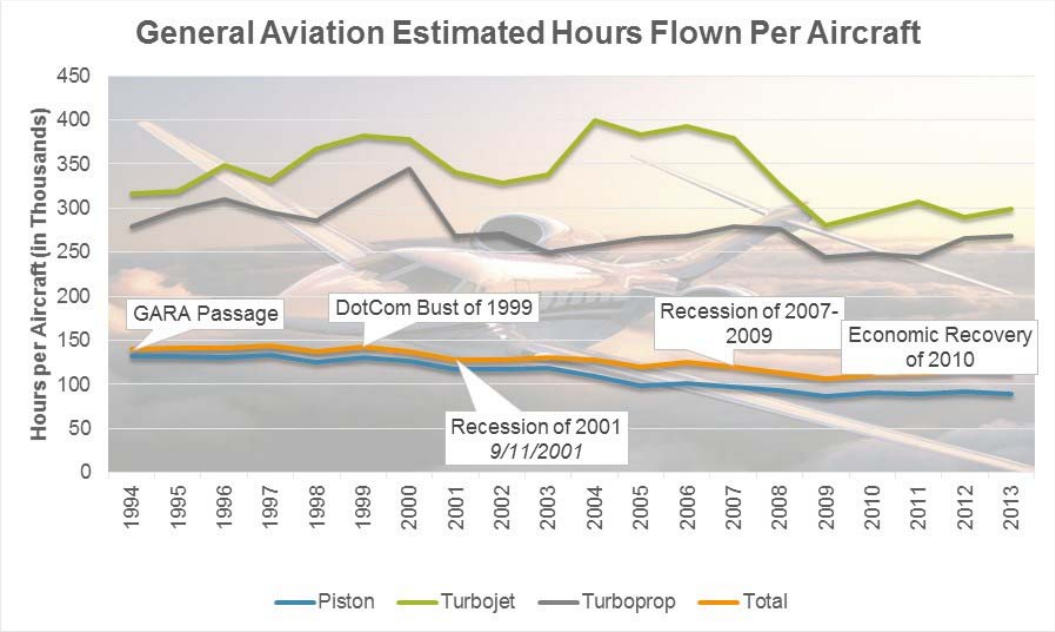
C. General Aviation Hours Flown

The total number of general aviation hours flown in the United States reached a low in 1994 of 24,092,000 hours, which represents a decrease of 43.9% and a compounded annual decrease of 1.7% over the period from the high of 41,017,000 achieved in 1980 (which corresponds with the first year data was available). In recent years general aviation hours flown have declined at a compounded annual rate of 0.8% since 2009 (to 23,009,000 hours flown in 2013).

While the number of hours flown by piston-powered aircraft have fluctuated (declining for the most part) since the early 1980s, the number of turboprop and turbojet aircraft hours flown have been cyclical over this same 34-year period. However, turbine aircraft hours have increased from 3,572,000 in 1980 to 6,075,000 (an increase of 70.1% or a compounded annual increase of 1.6%). These fluctuations can be attributed, in large part, to changes in the economy.

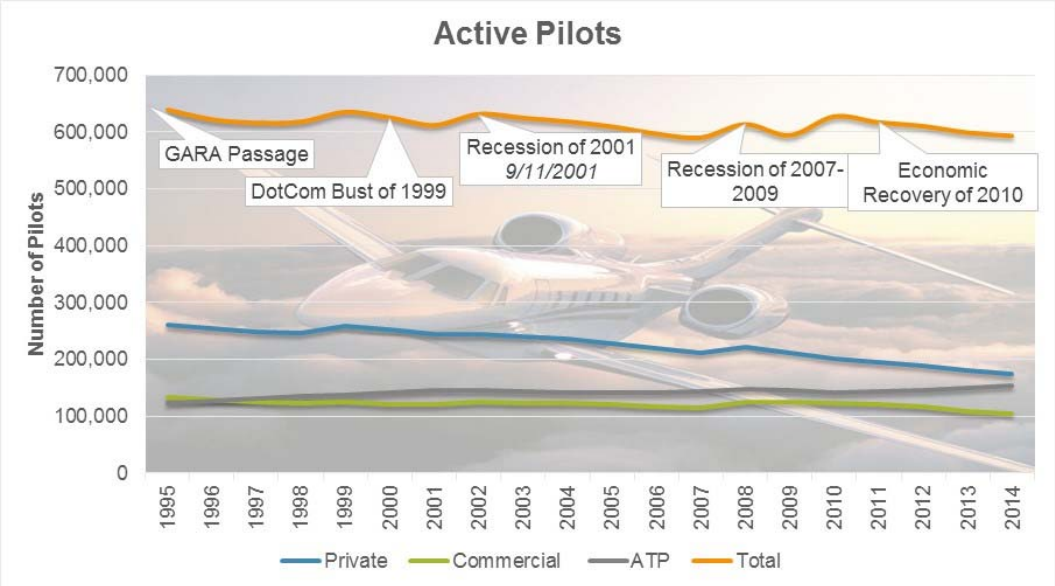


At first glance, the increase in the number of active general aviation aircraft since 1994 and the decline in general aviation hours flown since 1999 appear to be contradictory. However, these divergent trends are supported by the decline in the average number of hours flown per aircraft which has decreased from a high of 194.4 hours per aircraft in 1980 to a low of 106.1 hours per aircraft in 2009 (which represents a decrease of 45.4% or a compounded annual decrease of 2.1% over the period). Average number of hours flown by aircraft has increased slightly since 2009 to 112.7 in 2013 which represents an increase of 6.2% or a compounded annual increase of 1.5% over the period.



D. Active Pilots

Consistent with the trends in general aviation hours flown, the number of active pilots in the United States decreased throughout the 1980s and 1990s. Since peaking at 827,071 in 1980, the number of active pilots has declined 28.2% or a compounded annual decrease of 1.0% annually to 593,499 active pilots in 2014. During this overall decrease, the number of active pilots increased slightly in the late 1990s and early 2000s which can be attributed to pilot development programs. With minor fluctuations, the number of active pilots has remained relatively consistent since 2000. Out of the 593,499 active pilots in 2014, 100,993 or approximately 17.0% hold a Certified Flight Instructor certificate and 306,066 or 51.6% hold instrument ratings.



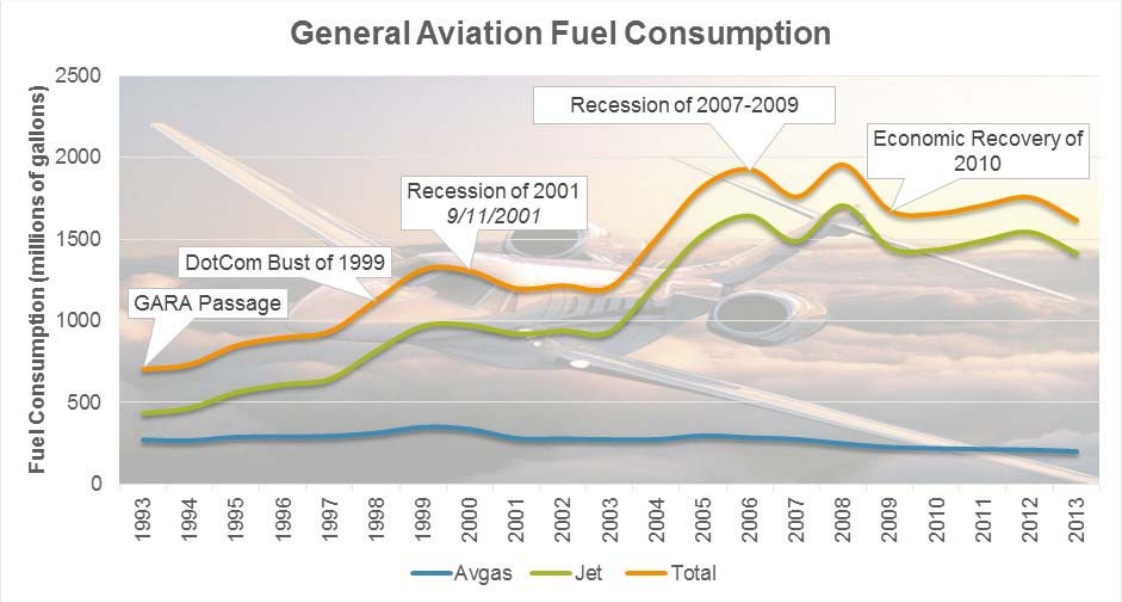
E. General Aviation Fuel Consumption

Total general aviation fuel consumption increased steadily from 1993 (702.8 million gallons) through 2000 (1,304.8 million gallons), which represents a total increase of 85.7% or a compounded annual increase of 9.2%. This trend can be attributed to an increase in aircraft manufacturing, expansion of fractional aircraft ownership, and a robust economy (particularly in the late 1990s). While general aviation fuel consumption declined slightly from 2000 through 2003 (due to the effect from the attacks of 9/11 and the economic recession that followed), general aviation fuel volumes rebounded to well past 2000 levels reaching 1,615.8 million gallons in 2013.

While aviation gasoline volumes declined through 1994 (except for small increases in 1984 and 1990), jet fuel volumes experienced several cycles of growth and decline throughout the same period. The dramatic drop in jet fuel volumes from 1989 to 1993 and the impressive recovery since 1994 are indicative of the resurgence in activity the industry has enjoyed since that time.

Aviation gasoline volumes experienced reasonable growth in the late 1990s only to be hit hard by the attacks of 9/11 and the subsequent recession. With the continued high oil costs this cost sensitive segment of the market continues to lose ground.

FBO revenues and profits are typically driven by the turbine-powered segment of the market. As such, the recovery of jet fuel volumes has been warmly received throughout the aviation service industry. As of 2013, there were 1821.5 million gallons of general aviation fuel consumed.



A.3 Industry Forecasts

The following are based on forecasts developed by the Federal Aviation Administration (FAA) and leading aviation industry product manufacturers including GAMA and Honeywell Aerospace's Business Aviation Outlook.

- General aviation aircraft hours flown are forecast to increase at an average annual rate of 1.4% through 2034.
- General aviation aircraft fuel consumed is forecast to increase at an average annual rate of 2.7% through 2034. Jet fuel consumption is forecast to increase at an average of 3.0% during this same period while avgas consumption is forecast to decrease an average of 0.2% annually through 2034.
- Active general aviation aircraft is forecast to increase at an average annual rate of 0.5% through 2034 with the business jet segment of general aviation aircraft forecast to have the most growth of 3.0% annually over the same time period.
- In 2013, aircraft shipments manufactured worldwide increased by 4.3% to 2,256 aircraft deliveries, while billings increased to 24.0% to $23.4 billion, the second-highest industry billing number ever recorded.

It is anticipated that increased aircraft manufacturing and general aviation hours flown will translate into additional general aviation fuel demand (volumes). It is expected that as the number of active aircraft increase, the demand for FBO products, services, and facilities (i.e., terminal buildings and aircraft parking, tiedown, and hangar space) will increase as well. In addition, as activity levels increase, the general aviation services industry will strengthen.

DEMAND DRIVERS STUDY

DEMAND DRIVERS STUDY

Appendix

Appendix B. **AVIATION INTERVIEW QUESTIONNAIRE**

Appendix B. AVIATION INTERVIEW QUESTIONNAIRE

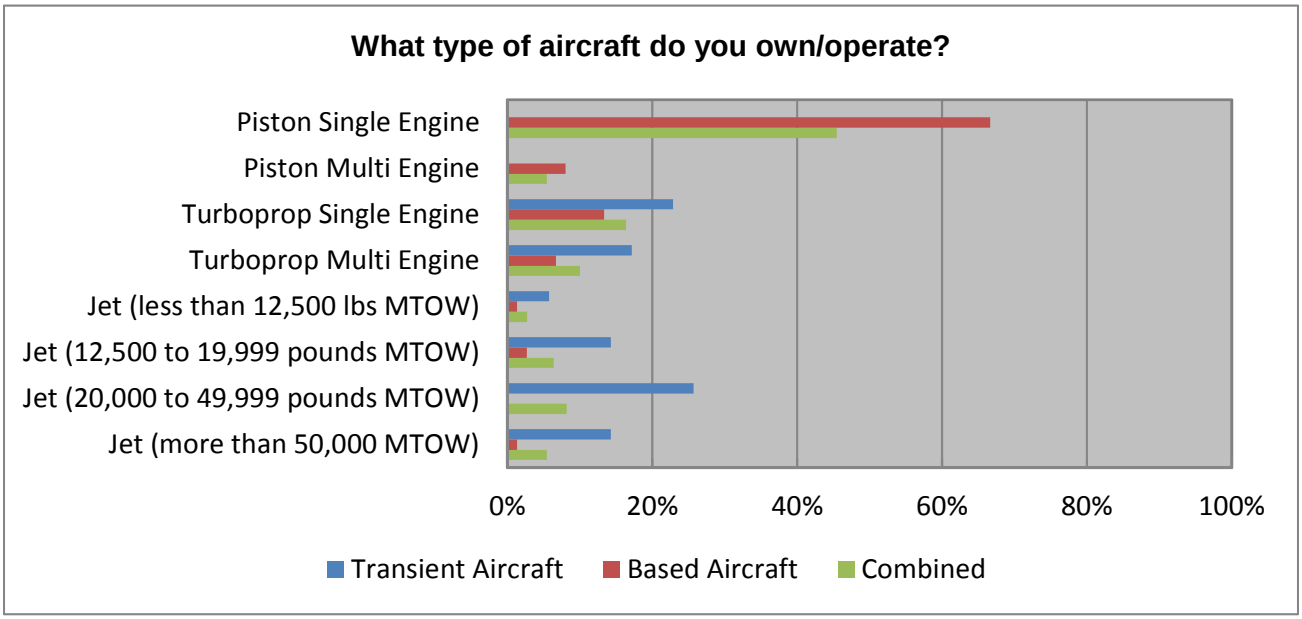
- Why do you choose to use TRK?
- What is your general opinion of the Airport (not the staff or the District)
- What type of aircraft do you own/operate?
- How do you operate your aircraft? (Part 91/91K/135)
- Are you based at TRK? If so Why? Of not Why Not?
- What type of aircraft storage facility would you like to rent at TRK?
- How often do you use the Airport and what season do you use it the most?
- Do you have a residence or business near the Airport?
- What attributes attract you to the Airport?
  - Location
  - Facilities
  - Services
- What additional services/facilities would increase your operations at the Airport?
  - Enhance instrument approach/departure procedures?
  - Aircraft deicing services?
  - Community hangar?
  - Enhanced Aircraft Maintenance & Repair?
  - Enhanced Line Services?
  - Enhanced Airside Infrastructure? (runway/taxiway/ramp/hangars)
- What changes in services/facilities at the Airport would decrease/impact your operations at the Airport
  - Reduced Airside Infrastructure?
  - Reduced Line Services?
  - Reduced Ground Transportation?
  - Lack of Fueling Services?
  - Reduced Aircraft Maintenance & Repair Services?
- If you had your way, what would you change to make TRK a more attractive place to use?
- What change(s) would have would have the greatest negative impact on your use of the Airport?
- Does the cost of fuel impact your choice of using the Airport? How much fuel do you purchase annually?
- Is there anything else you would like to add or discuss regarding Truckee Tahoe Airport?

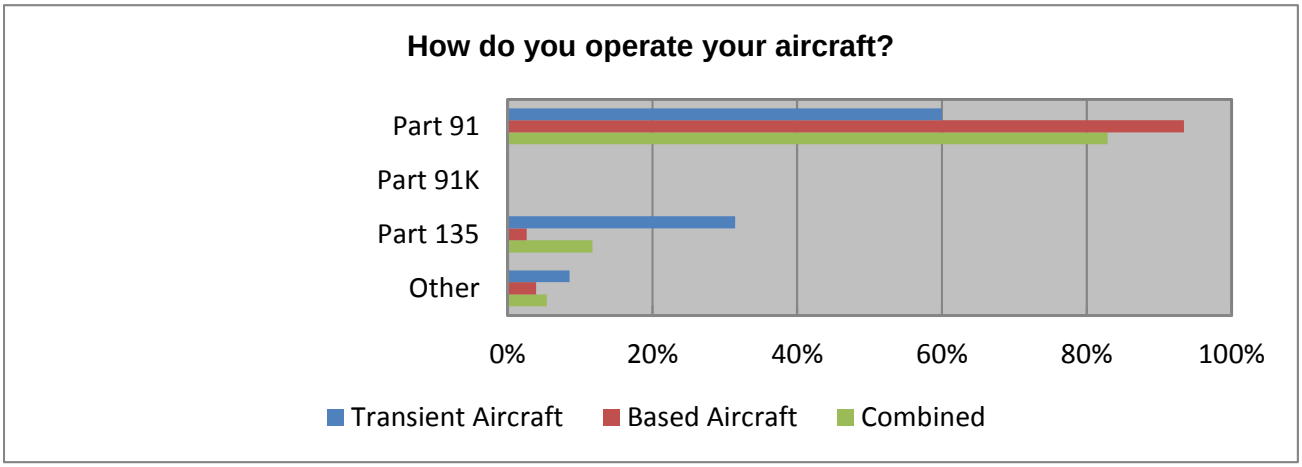
DEMAND DRIVERS STUDY

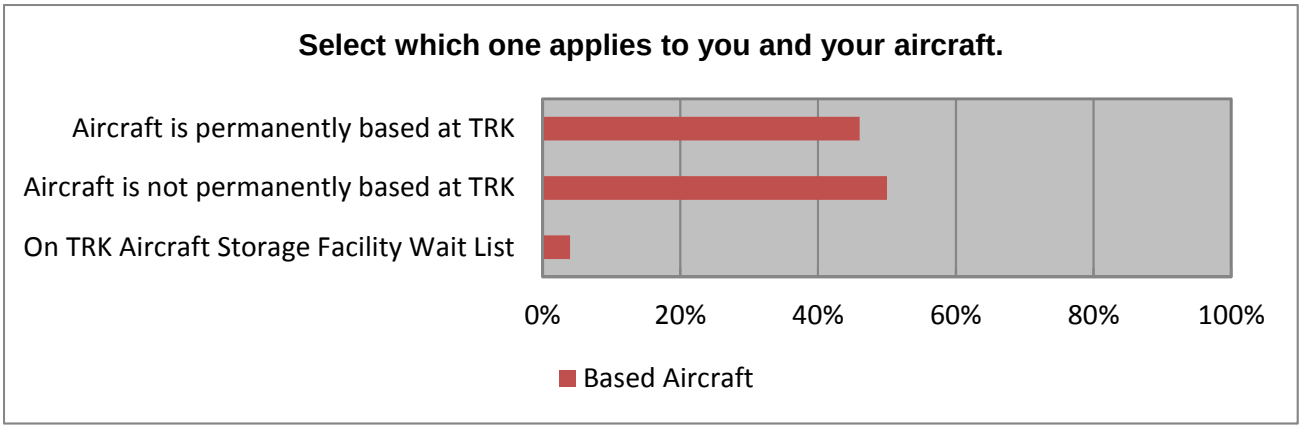
Appendix

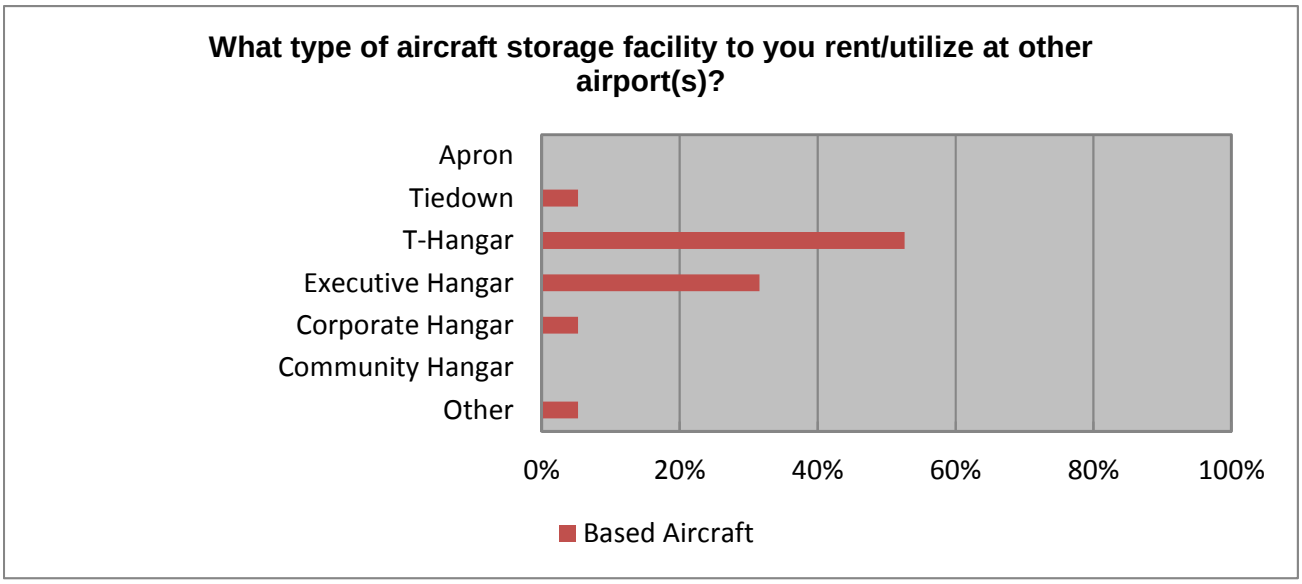
Appendix C. **AVIATION SURVEY RESULTS**

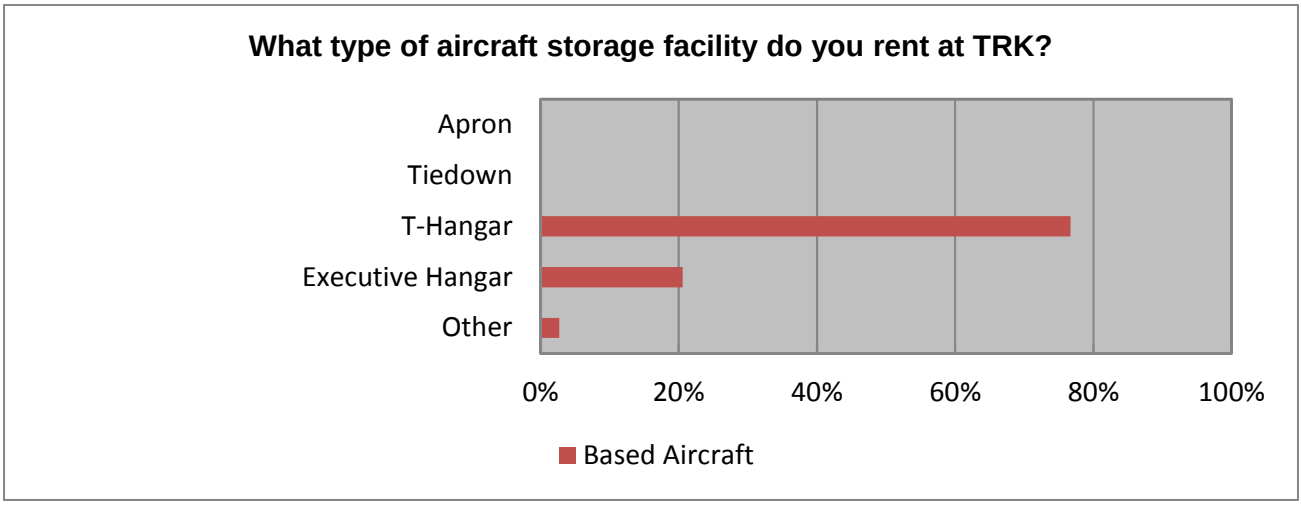
Appendix C. AVIATION SURVEY RESULTS



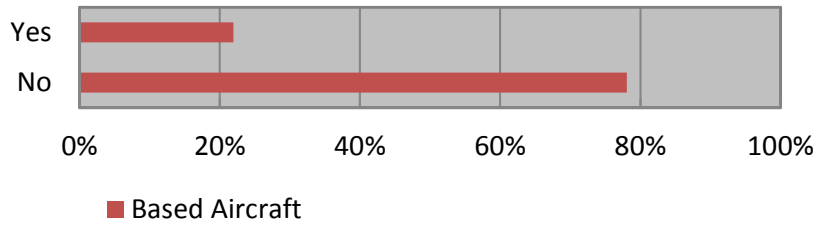



Select which one applies to you and your aircraft.
Aircraft is permanently based at TRK
Aircraft is not permanently based at TRK
On TRK Aircraft Storage Facility Wait List
0%
20%
40%
60%
80%
100%
Based Aircraft

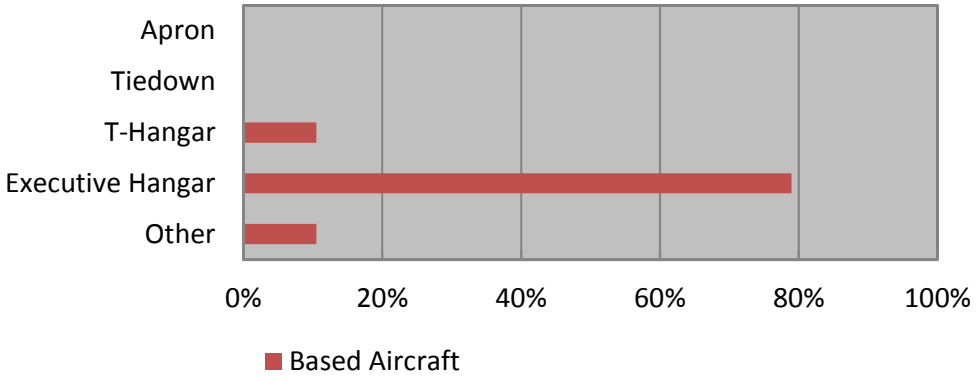

What type of aircraft storage facility to you rent/utilize at other airport(s)?
Apron
Tiedown
T-Hangar
Executive Hangar
Corporate Hangar
Community Hangar
Other
0%
20%
40%
60%
80%
100%
Based Aircraft


What type of aircraft storage facility do you rent at TRK?
Apron
Tiedown
T-Hangar
Executive Hangar
Other
0%
20%
40%
60%
80%
100%
Based Aircraft

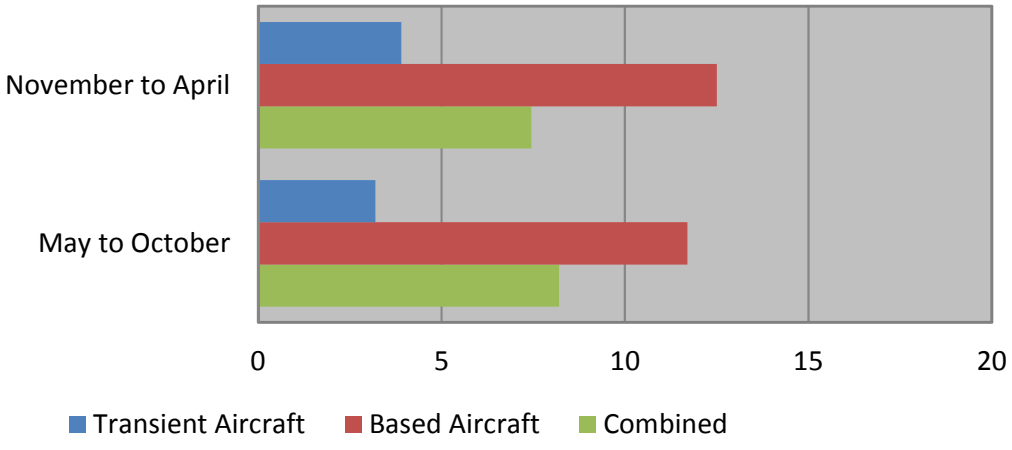
Are you on the TRK Aircraft Storage Facility Wait List for a different type of aircraft storage facility or do you desire a different type of aircraft storage facility from your current?

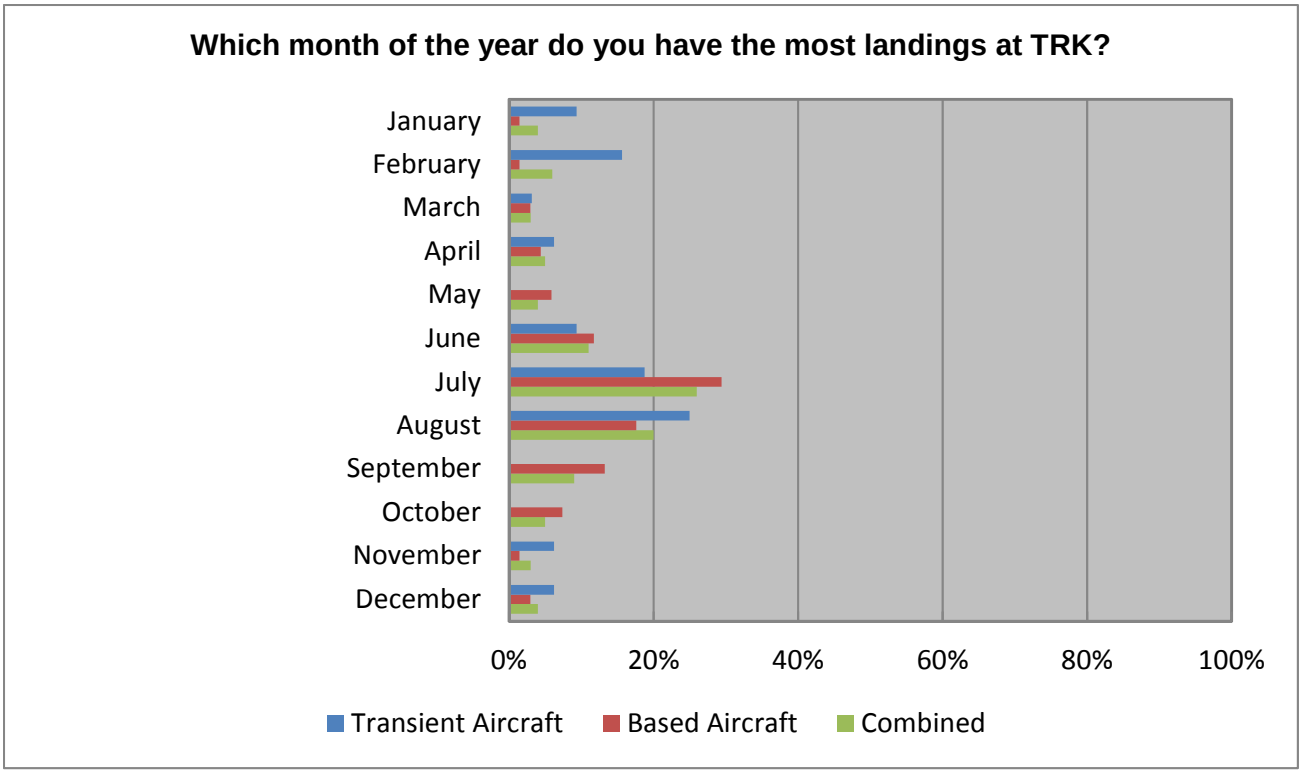


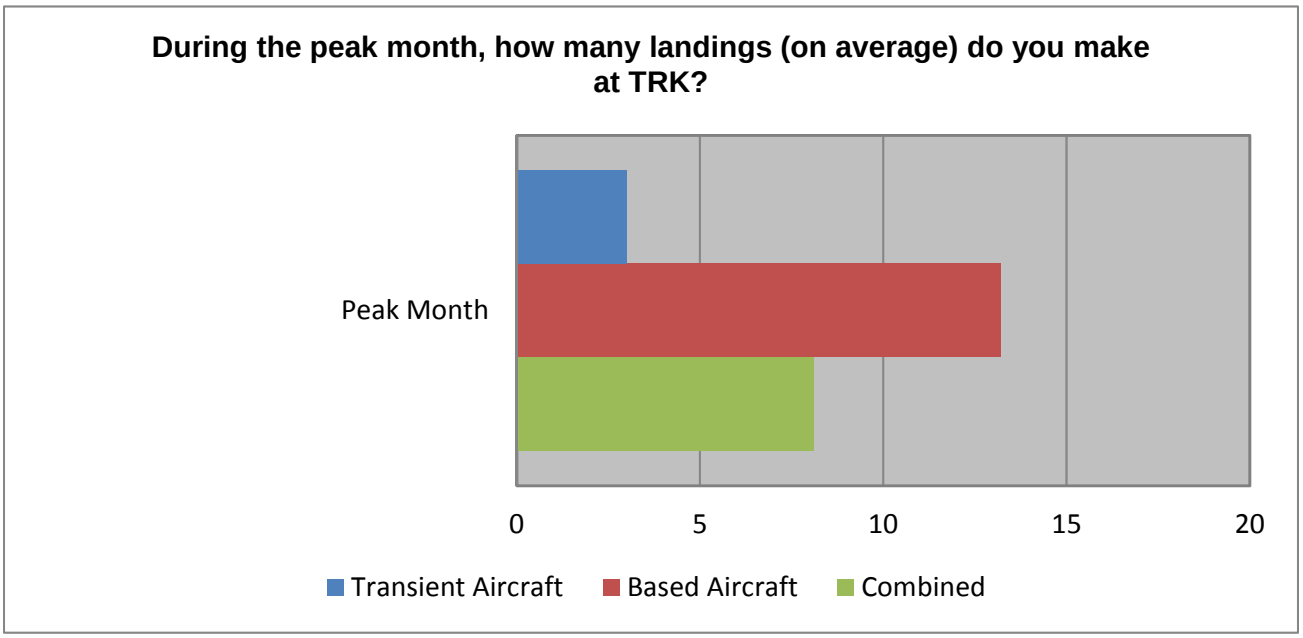
What type of aircraft storage facility would you like to rent at TRK?

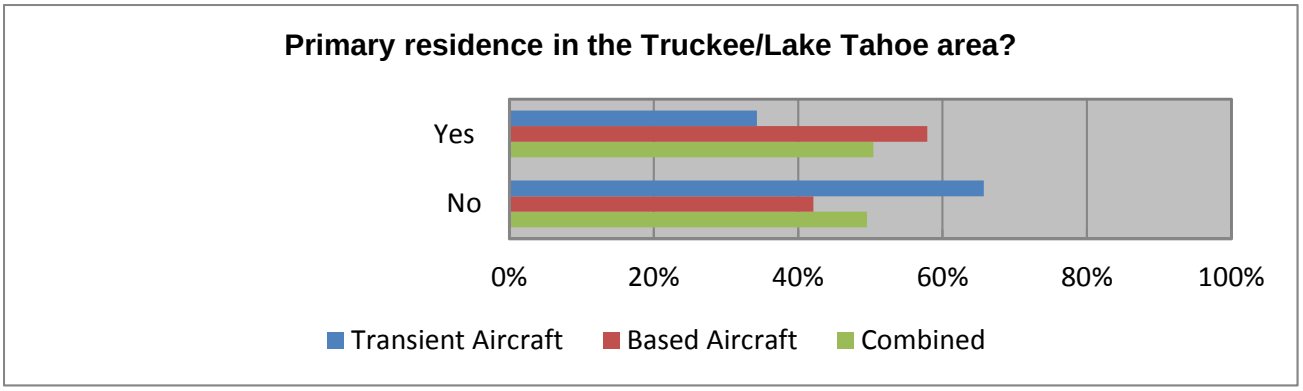


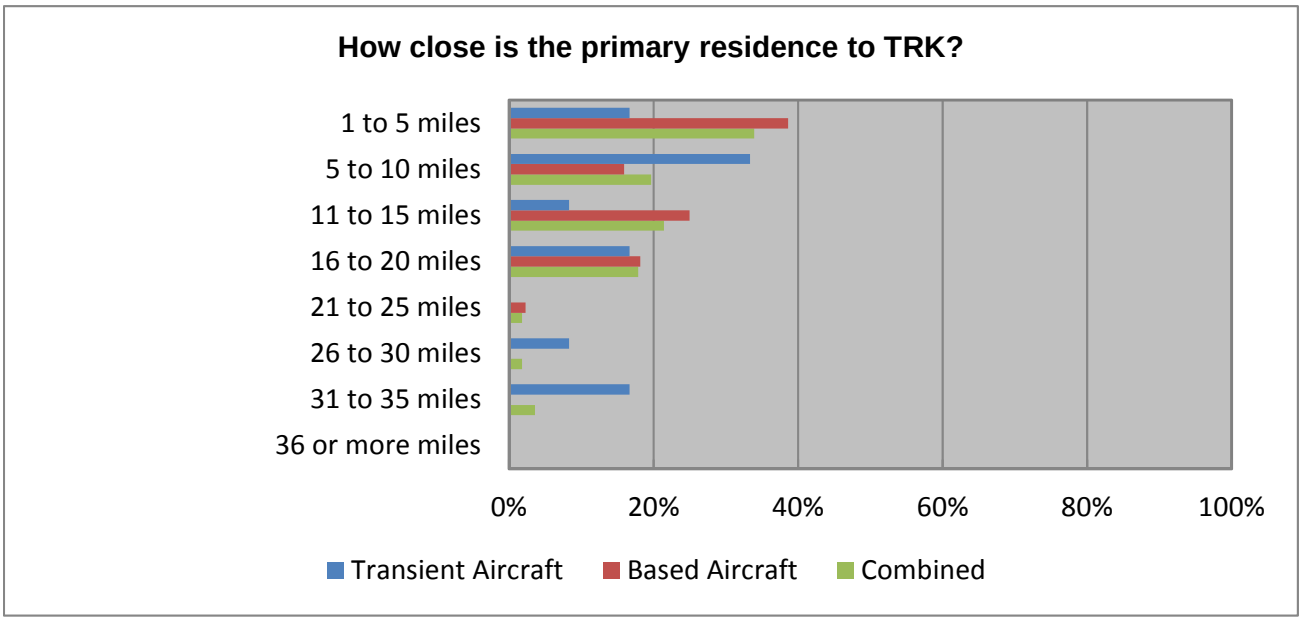
How many average landings a month do you make at TRK during winter and spring months (November to April) and summer and fall months (May to October)?

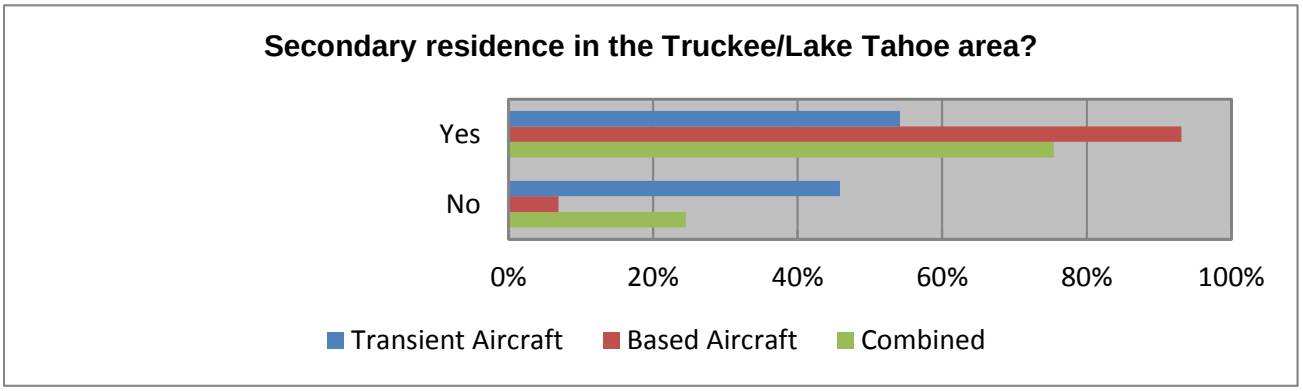


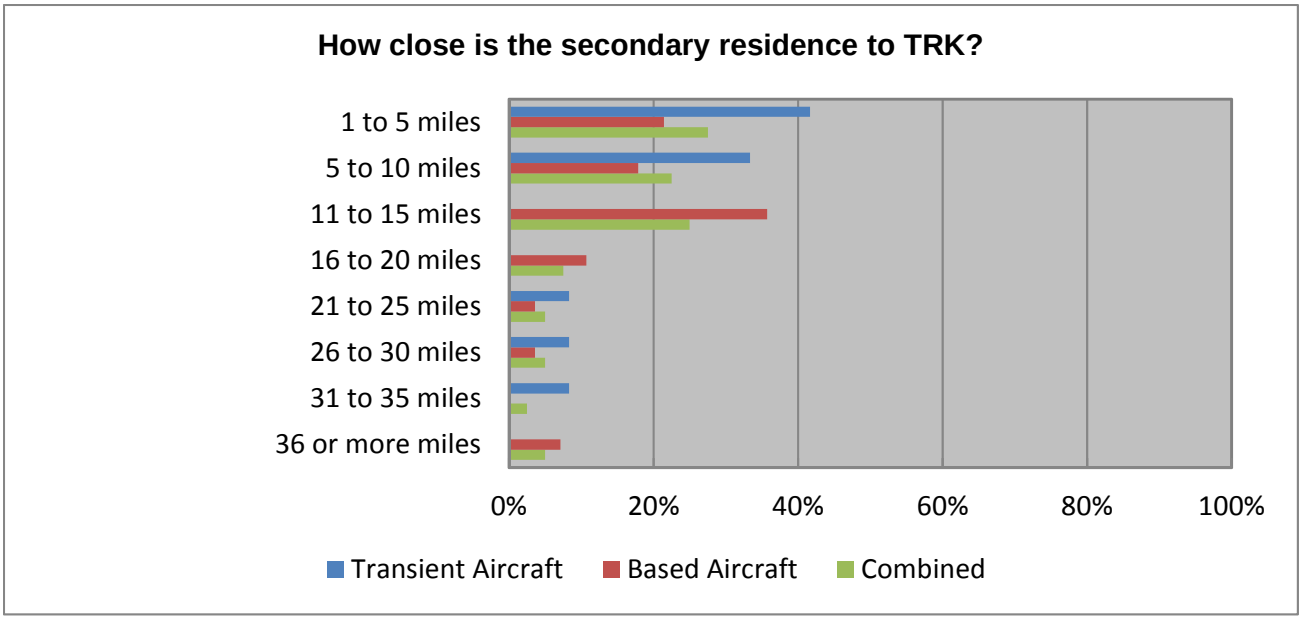

Which month of the year do you have the most landings at TRK?
January
February
March
April
May
June
July
August
September
October
November
December
0%
20%
40%
60%
80%
100%
Transient Aircraft
Based Aircraft
Combined

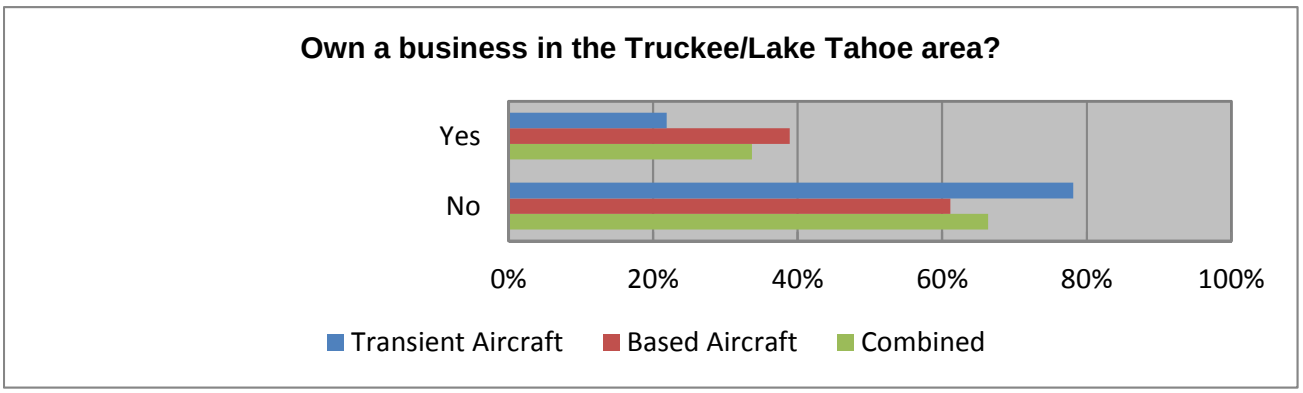

During the peak month, how many landings (on average) do you make at TRK?
Peak Month
0
5
10
15
20
Transient Aircraft
Based Aircraft
Combined

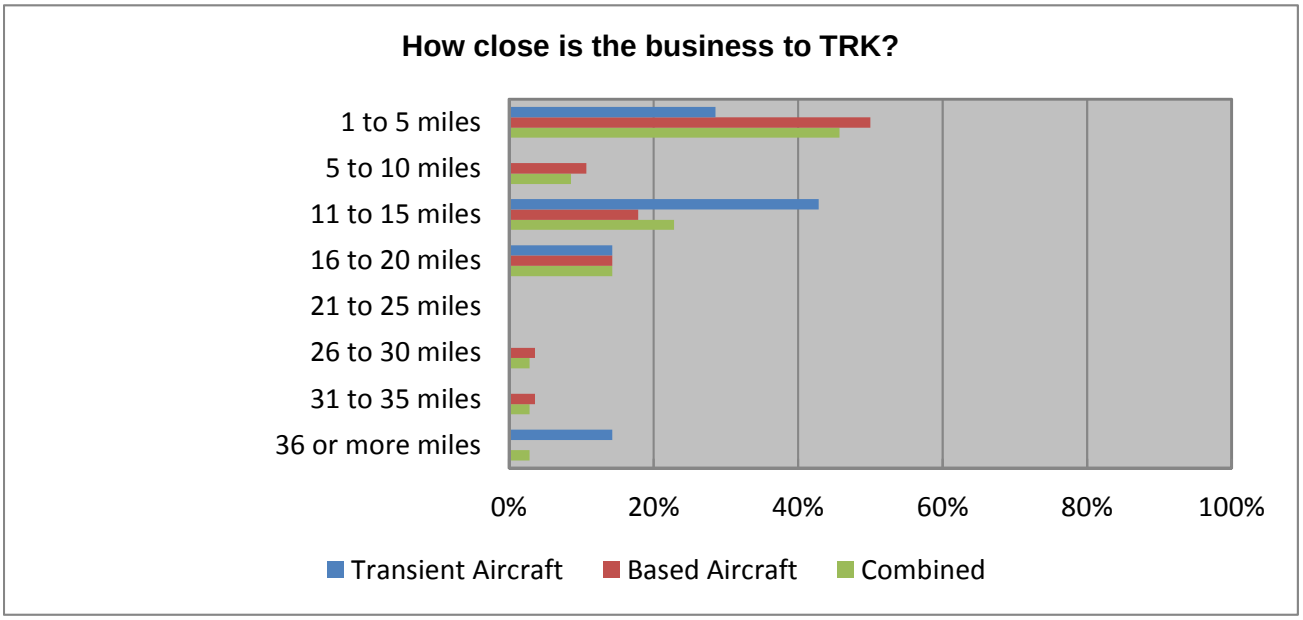

Primary residence in the Truckee/Lake Tahoe area?
Yes
No
0%
20%
40%
60%
80%
100%
Transient Aircraft
Based Aircraft
Combined

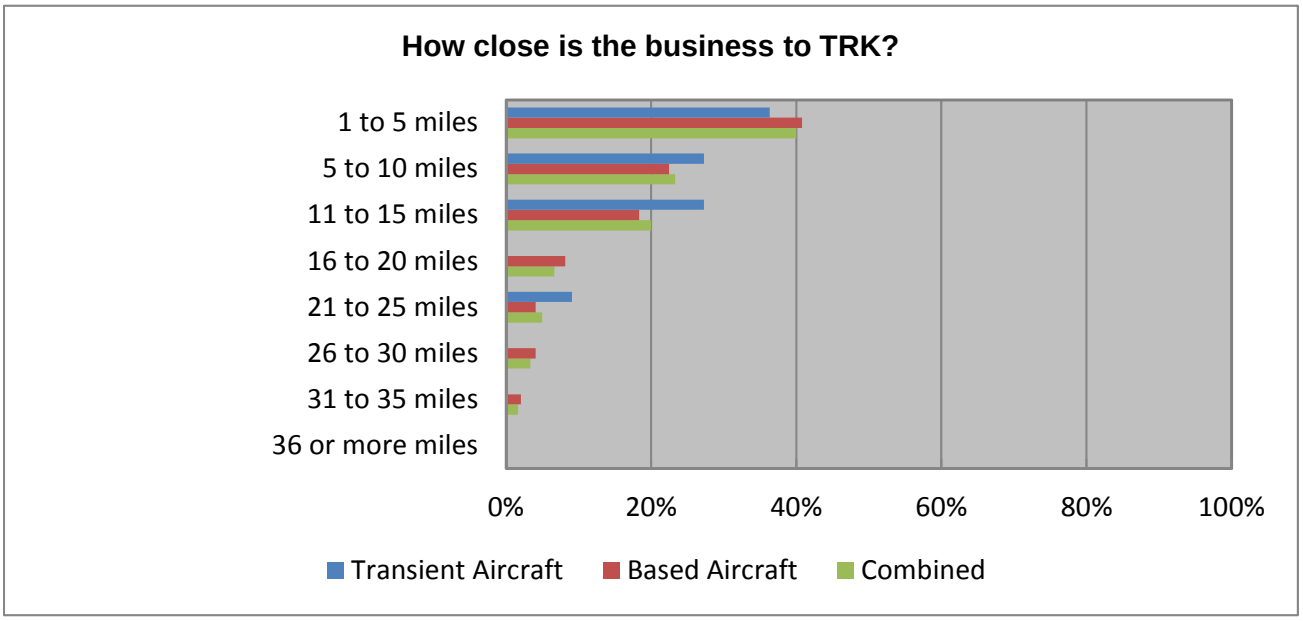

How close is the primary residence to TRK?
1 to 5 miles
5 to 10 miles
11 to 15 miles
16 to 20 miles
21 to 25 miles
26 to 30 miles
31 to 35 miles
36 or more miles
0%
20%
40%
60%
80%
100%
Transient Aircraft
Based Aircraft
Combined

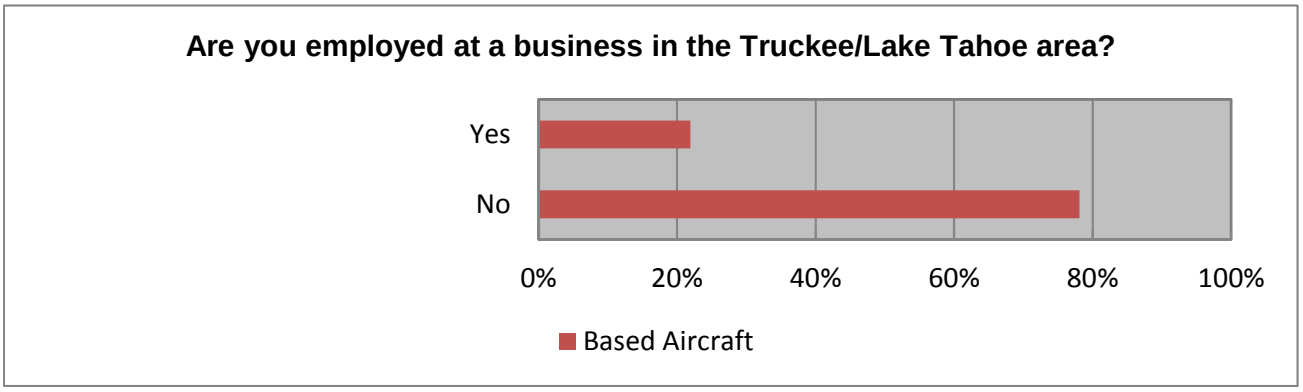

Secondary residence in the Truckee/Lake Tahoe area?
Yes
No
0%
20%
40%
60%
80%
100%
Transient Aircraft
Based Aircraft
Combined

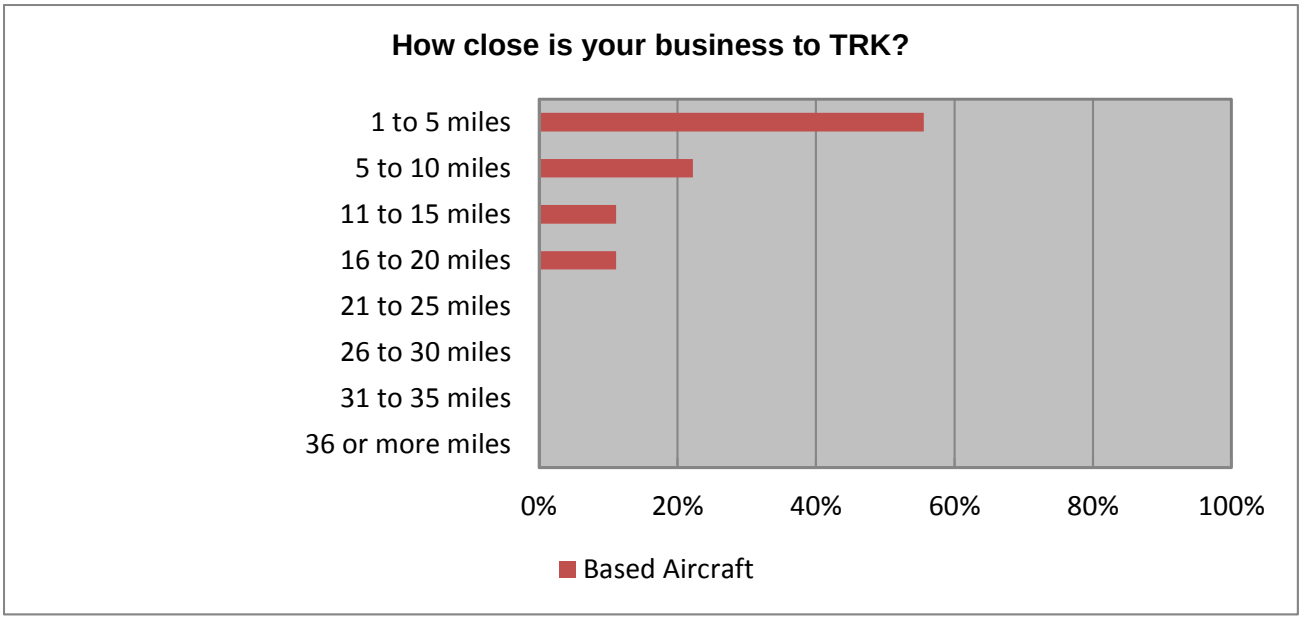

How close is the secondary residence to TRK?
1 to 5 miles
5 to 10 miles
11 to 15 miles
16 to 20 miles
21 to 25 miles
26 to 30 miles
31 to 35 miles
36 or more miles
0%
20%
40%
60%
80%
100%
Transient Aircraft
Based Aircraft
Combined

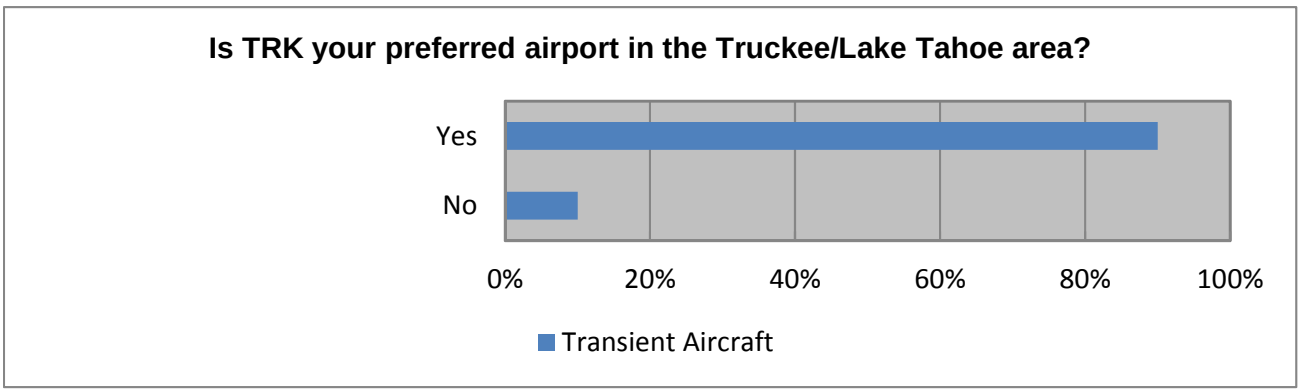

Own a business in the Truckee/Lake Tahoe area?
Yes
No
0%
20%
40%
60%
80%
100%
Transient Aircraft
Based Aircraft
Combined

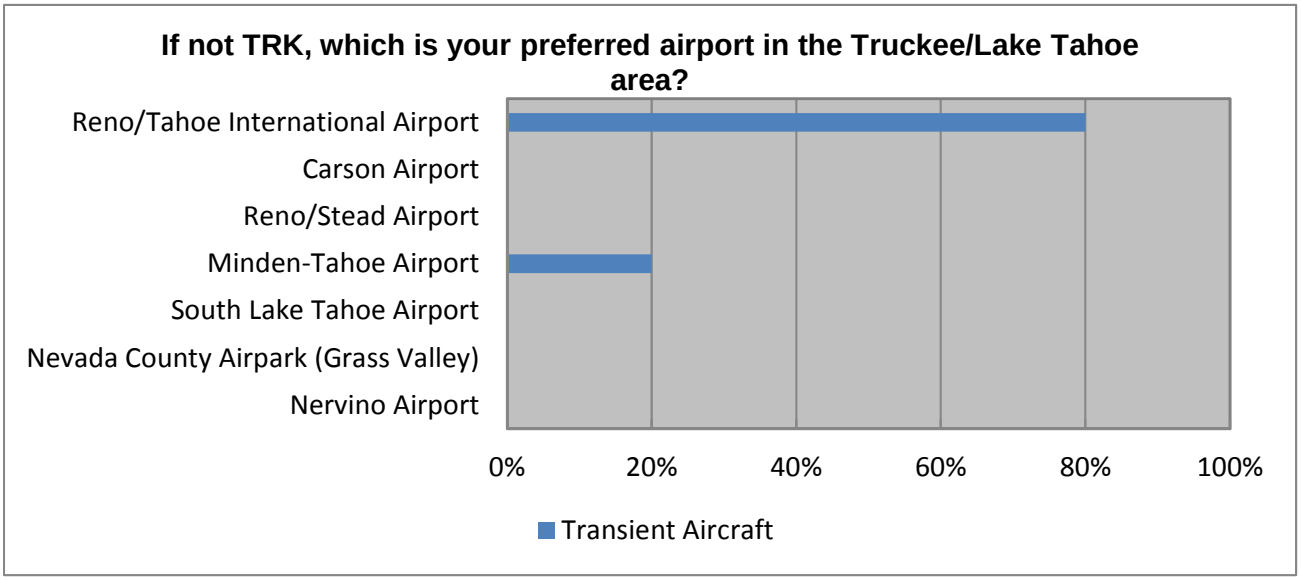

How close is the business to TRK?
1 to 5 miles
5 to 10 miles
11 to 15 miles
16 to 20 miles
21 to 25 miles
26 to 30 miles
31 to 35 miles
36 or more miles
0%
20%
40%
60%
80%
100%
Transient Aircraft
Based Aircraft
Combined

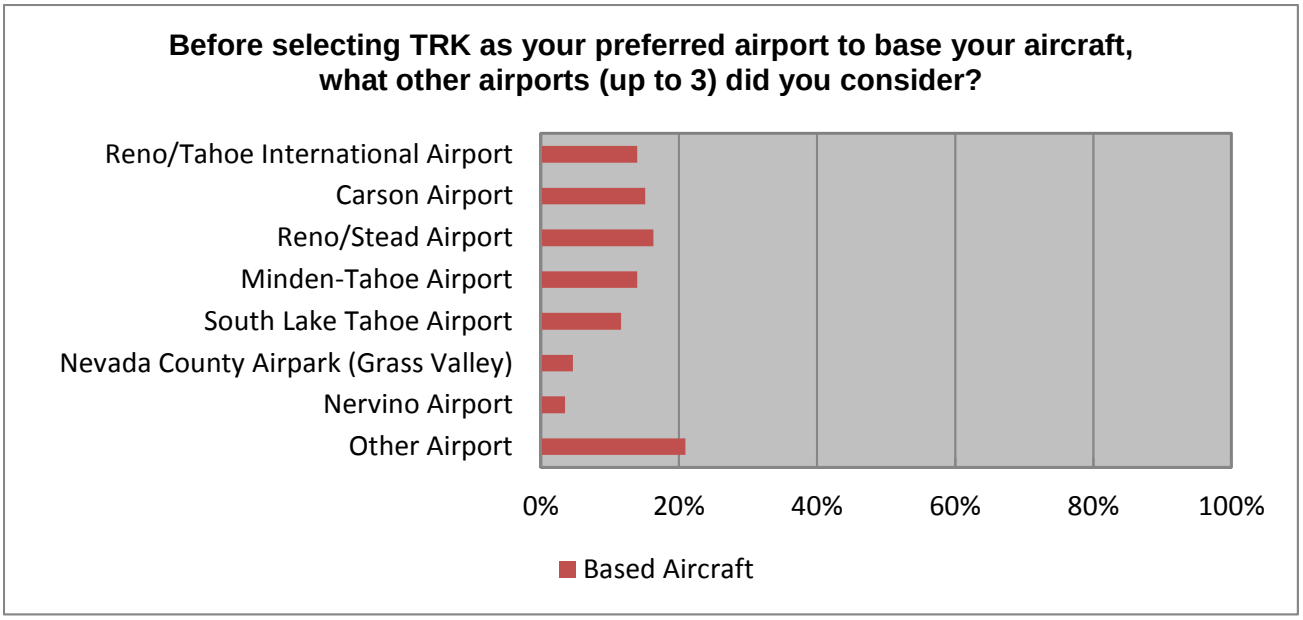

How close is the business to TRK?
1 to 5 miles
5 to 10 miles
11 to 15 miles
16 to 20 miles
21 to 25 miles
26 to 30 miles
31 to 35 miles
36 or more miles
0%
20%
40%
60%
80%
100%
Transient Aircraft
Based Aircraft
Combined

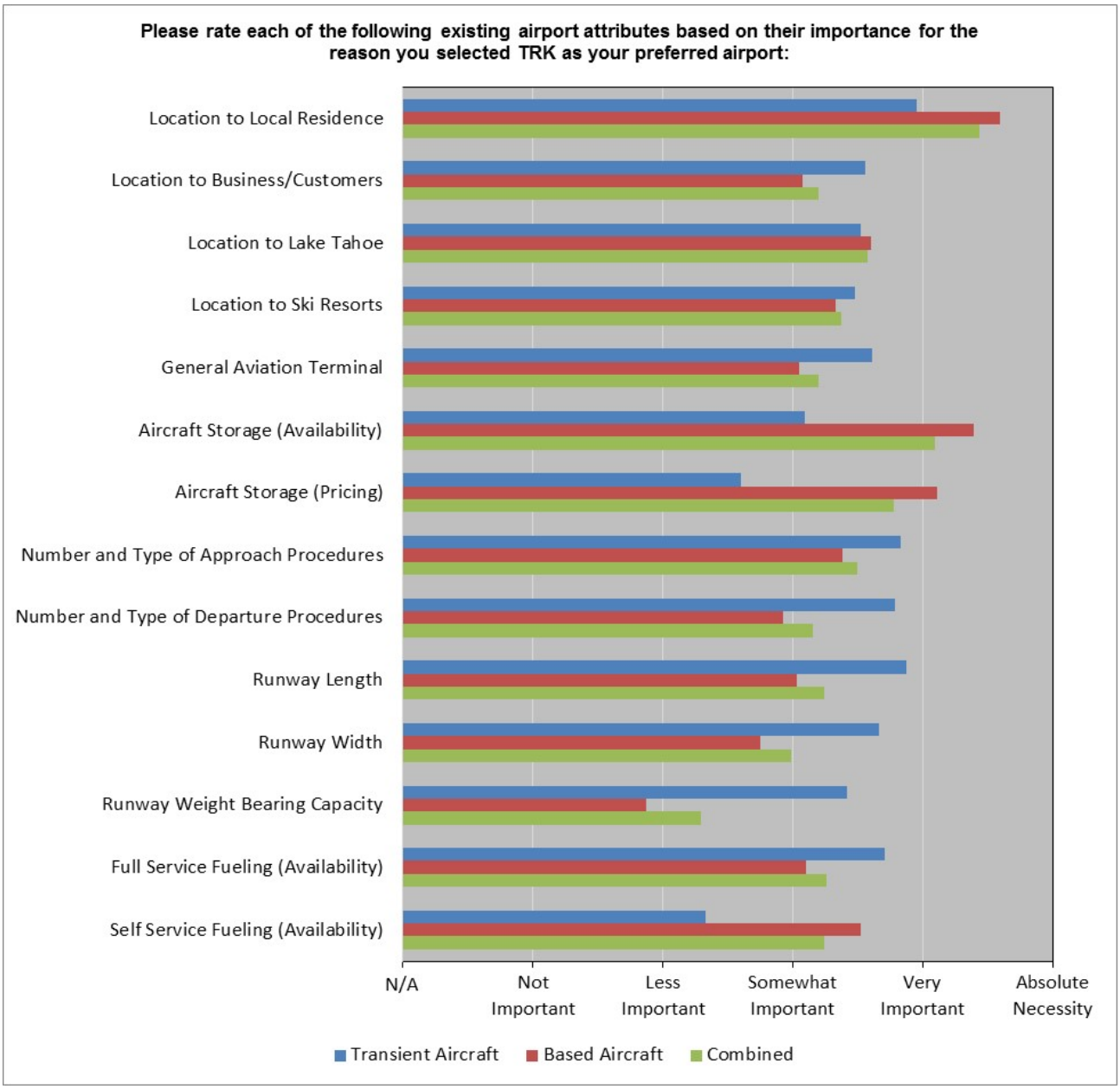

Are you employed at a business in the Truckee/Lake Tahoe area?
Yes
No
0%
20%
40%
60%
80%
100%
Based Aircraft

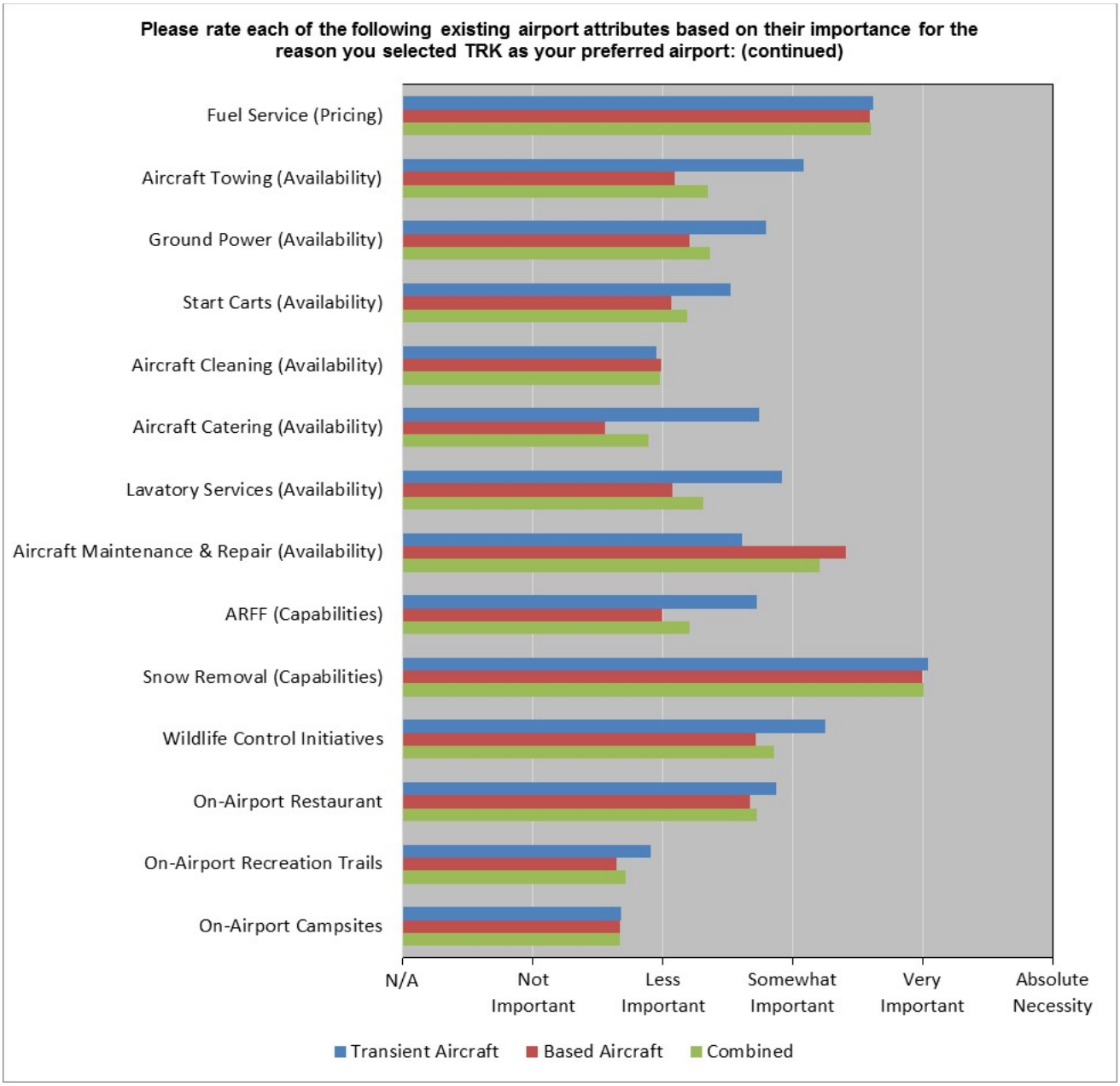

How close is your business to TRK?
1 to 5 miles
5 to 10 miles
11 to 15 miles
16 to 20 miles
21 to 25 miles
26 to 30 miles
31 to 35 miles
36 or more miles
0%
20%
40%
60%
80%
100%
Based Aircraft

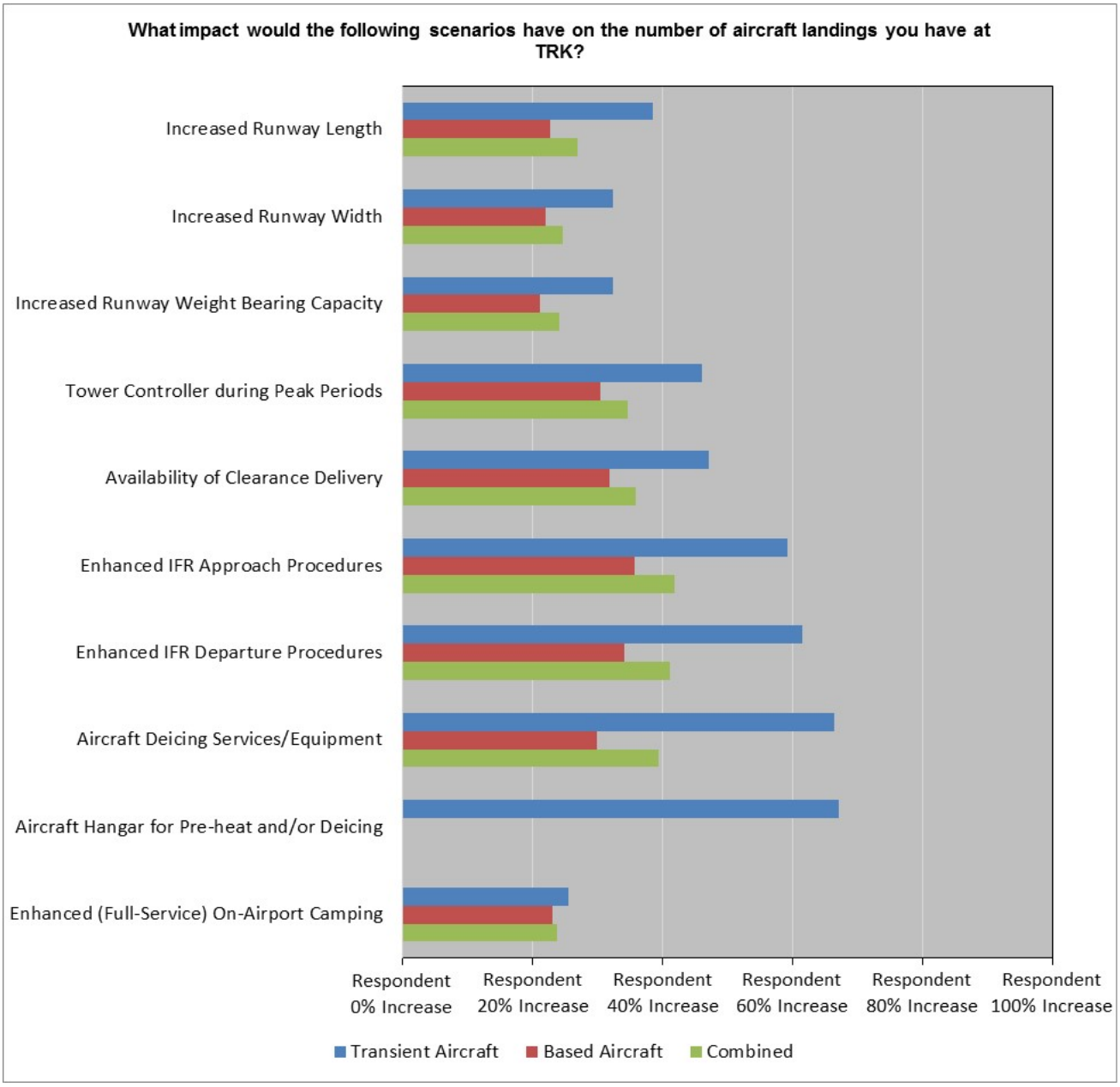

Is TRK your preferred airport in the Truckee/Lake Tahoe area?
Yes
No
0%
20%
40%
60%
80%
100%
Transient Aircraft

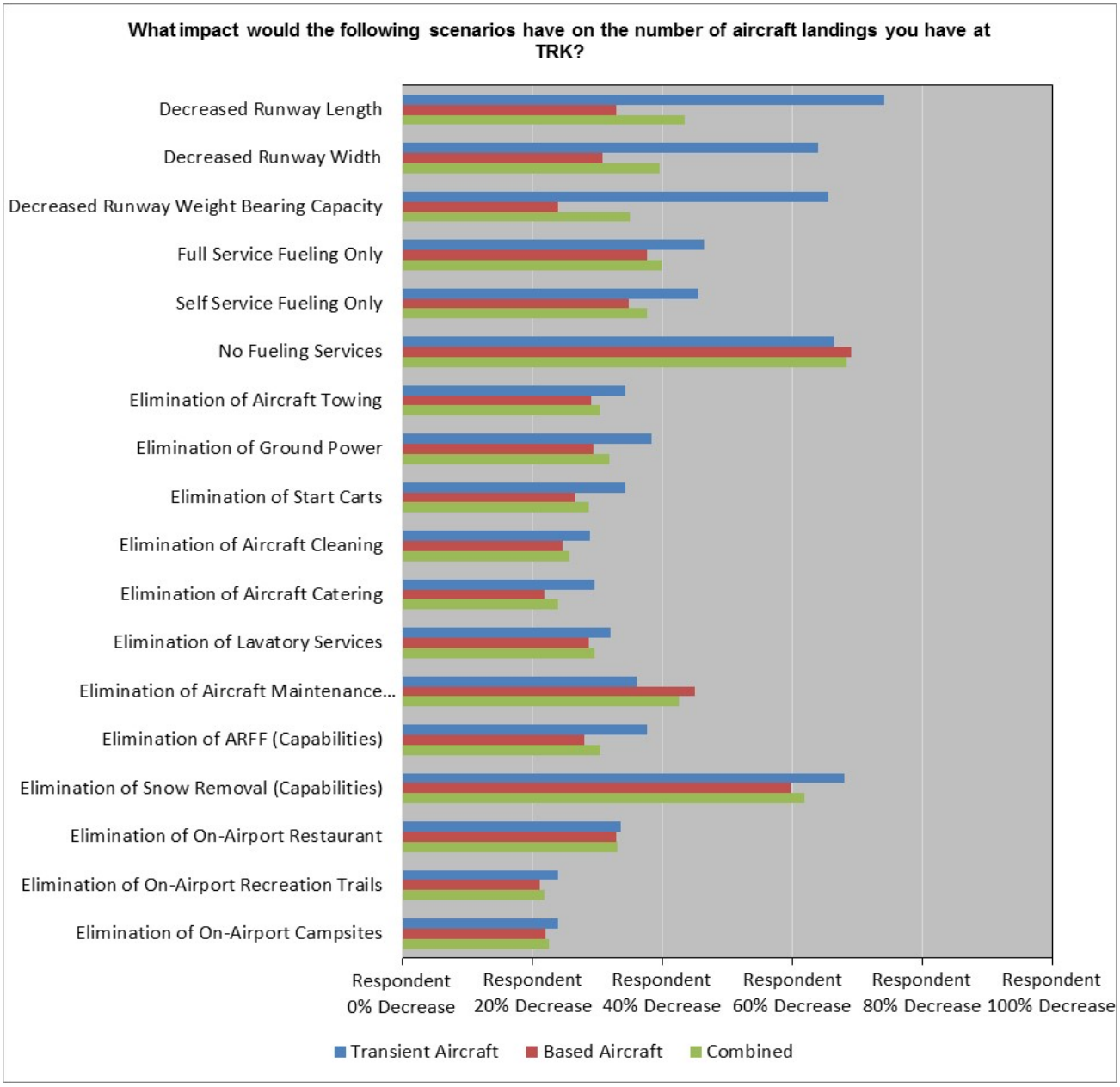

If not TRK, which is your preferred airport in the Truckee/Lake Tahoe area?
Reno/Tahoe International Airport
Carson Airport
Reno/Stead Airport
Minden-Tahoe Airport
South Lake Tahoe Airport
Nevada County Airpark (Grass Valley)
Nervino Airport
0%
20%
40%
60%
80%
100%
Transient Aircraft

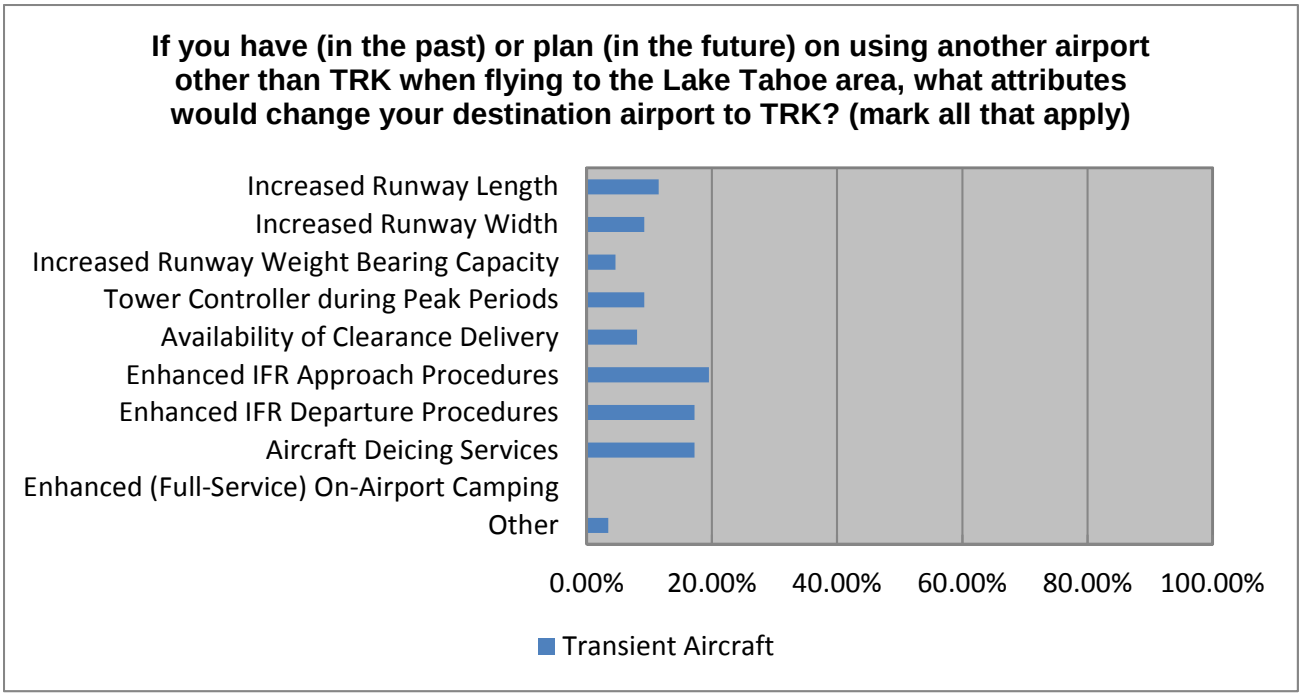

Before selecting TRK as your preferred airport to base your aircraft, what other airports (up to 3) did you consider?
Reno/Tahoe International Airport
Carson Airport
Reno/Stead Airport
Minden-Tahoe Airport
South Lake Tahoe Airport
Nevada County Airpark (Grass Valley)
Nervino Airport
Other Airport
0%
20%
40%
60%
80%
100%
Based Aircraft

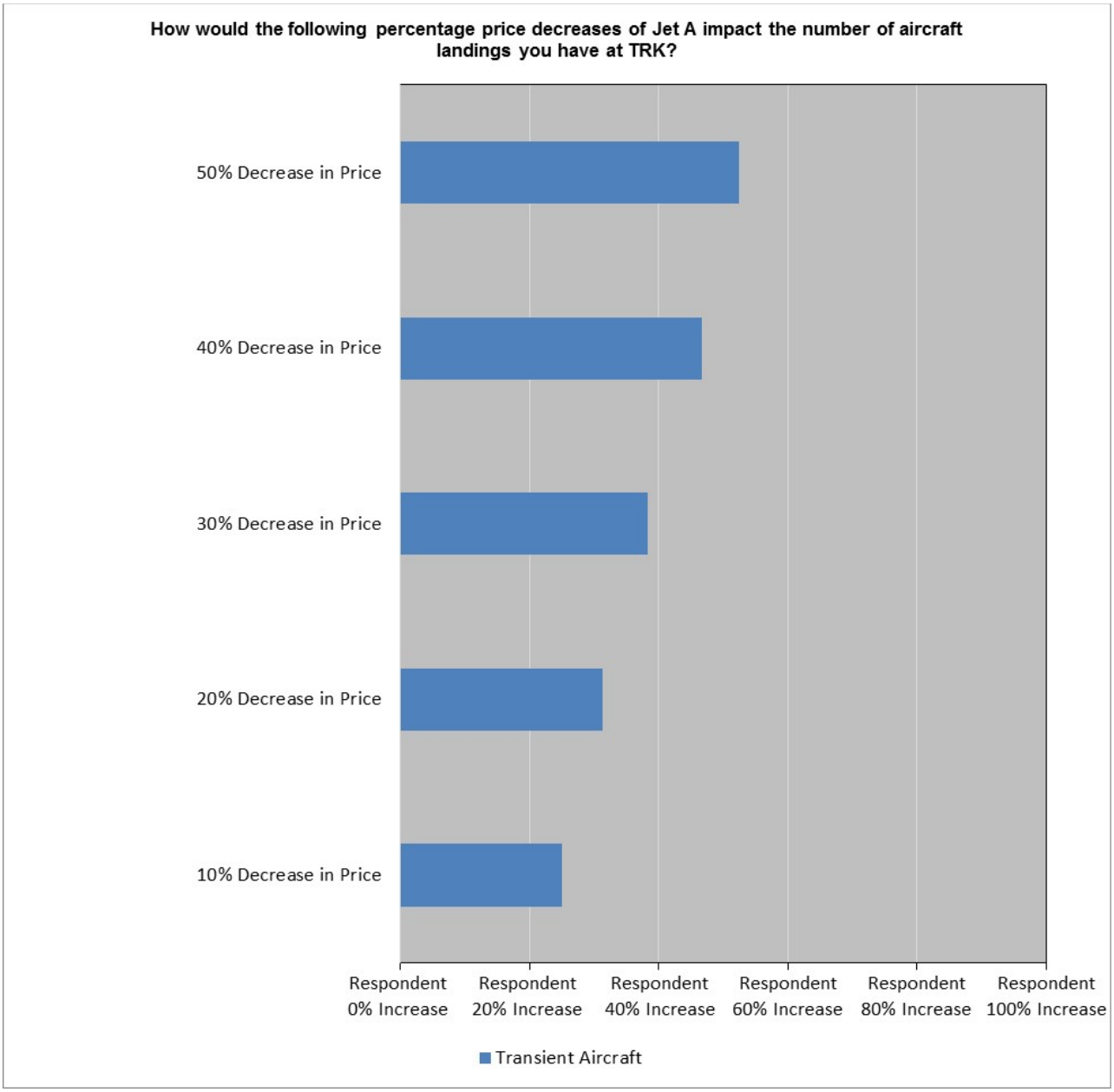

Please rate each of the following existing airport attributes based on their importance for the reason you selected TRK as your preferred airport:
Location to Local Residence
Location to Business/Customers
Location to Lake Tahoe
Location to Ski Resorts
General Aviation Terminal
Aircraft Storage (Availability)
Aircraft Storage (Pricing)
Number and Type of Approach Procedures
Number and Type of Departure Procedures
Runway Length
Runway Width
Runway Weight Bearing Capacity
Full Service Fueling (Availability)
Self Service Fueling (Availability)
N/A
Not Important
Less Important
Somewhat Important
Very Important
Absolute Necessity
Transient Aircraft
Based Aircraft
Combined

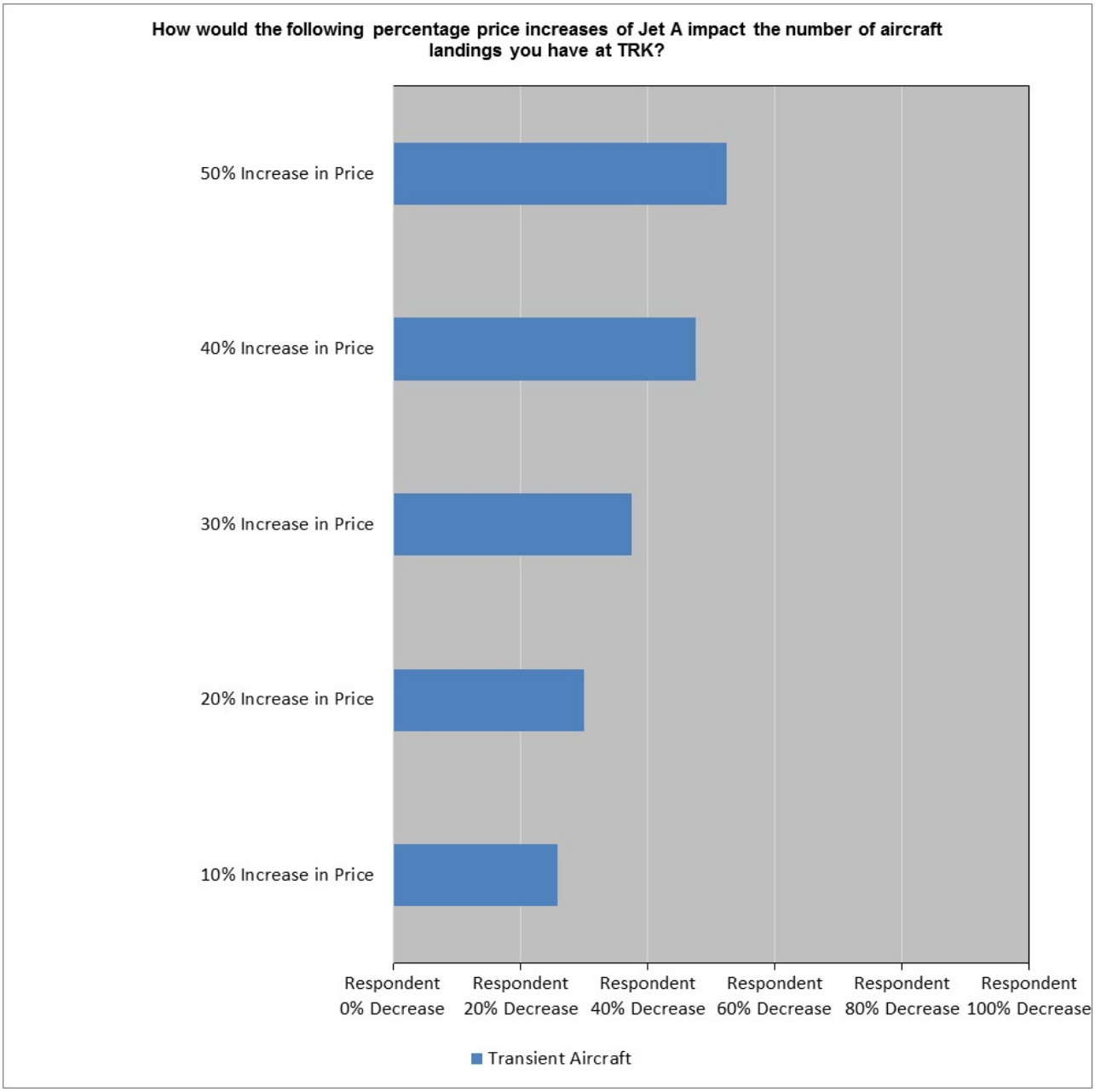

Please rate each of the following existing airport attributes based on their importance for the reason you selected TRK as your preferred airport: (continued)
Fuel Service (Pricing)
Aircraft Towing (Availability)
Ground Power (Availability)
Start Carts (Availability)
Aircraft Cleaning (Availability)
Aircraft Catering (Availability)
Lavatory Services (Availability)
Aircraft Maintenance & Repair (Availability)
ARFF (Capabilities)
Snow Removal (Capabilities)
Wildlife Control Initiatives
On-Airport Restaurant
On-Airport Recreation Trails
On-Airport Campsites
N/A
Not Important
Less Important
Somewhat Important
Very Important
Absolute Necessity
Transient Aircraft
Based Aircraft
Combined

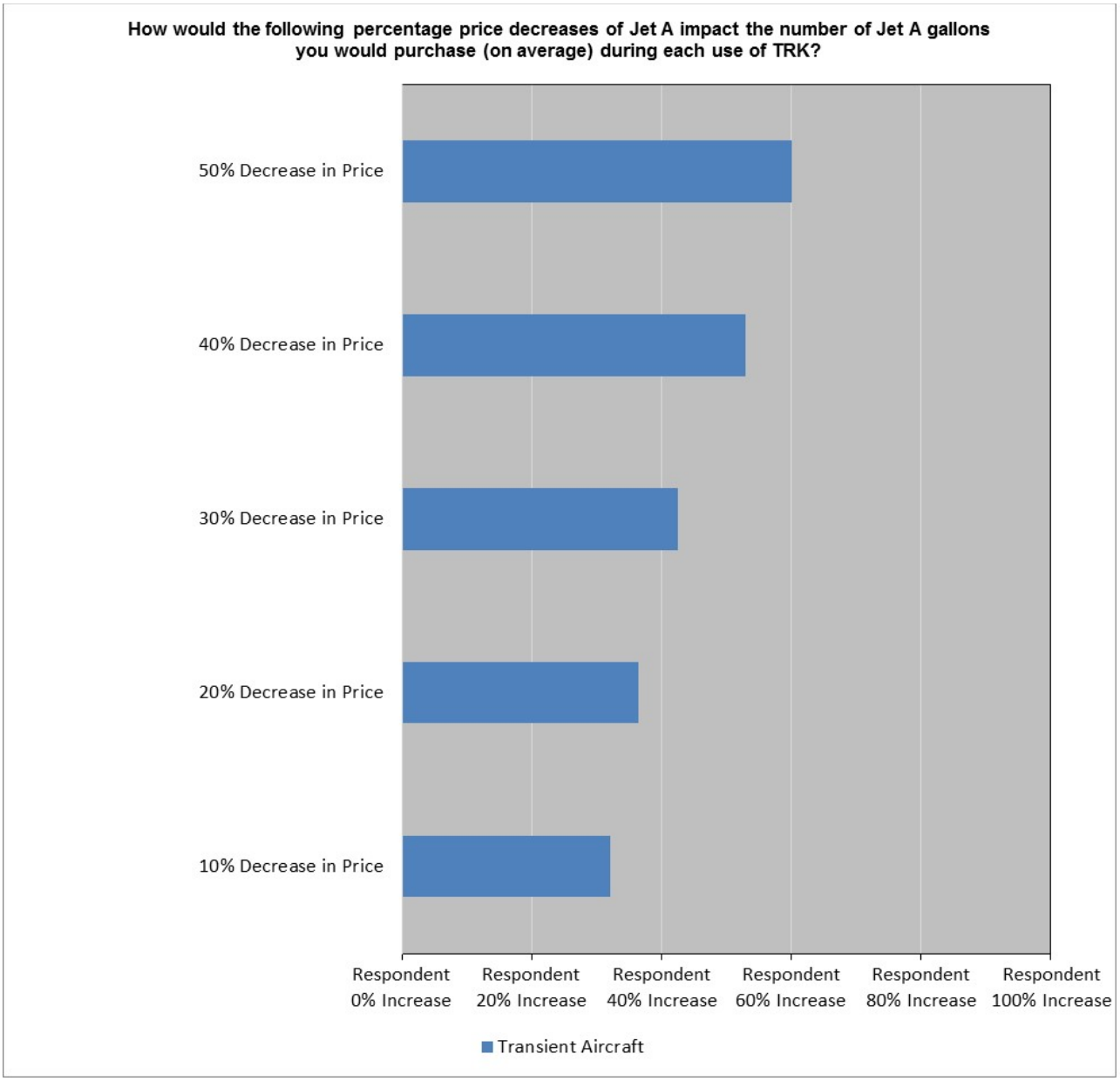

What impact would the following scenarios have on the number of aircraft landings you have at TRK?
Increased Runway Length
Increased Runway Width
Increased Runway Weight Bearing Capacity
Tower Controller during Peak Periods
Availability of Clearance Delivery
Enhanced IFR Approach Procedures
Enhanced IFR Departure Procedures
Aircraft Deicing Services/Equipment
Aircraft Hangar for Pre-heat and/or Deicing
Enhanced (Full-Service) On-Airport Camping
Respondent 0% Increase
Respondent 20% Increase
Respondent 40% Increase
Respondent 60% Increase
Respondent 80% Increase
Respondent 100% Increase
Transient Aircraft
Based Aircraft
Combined

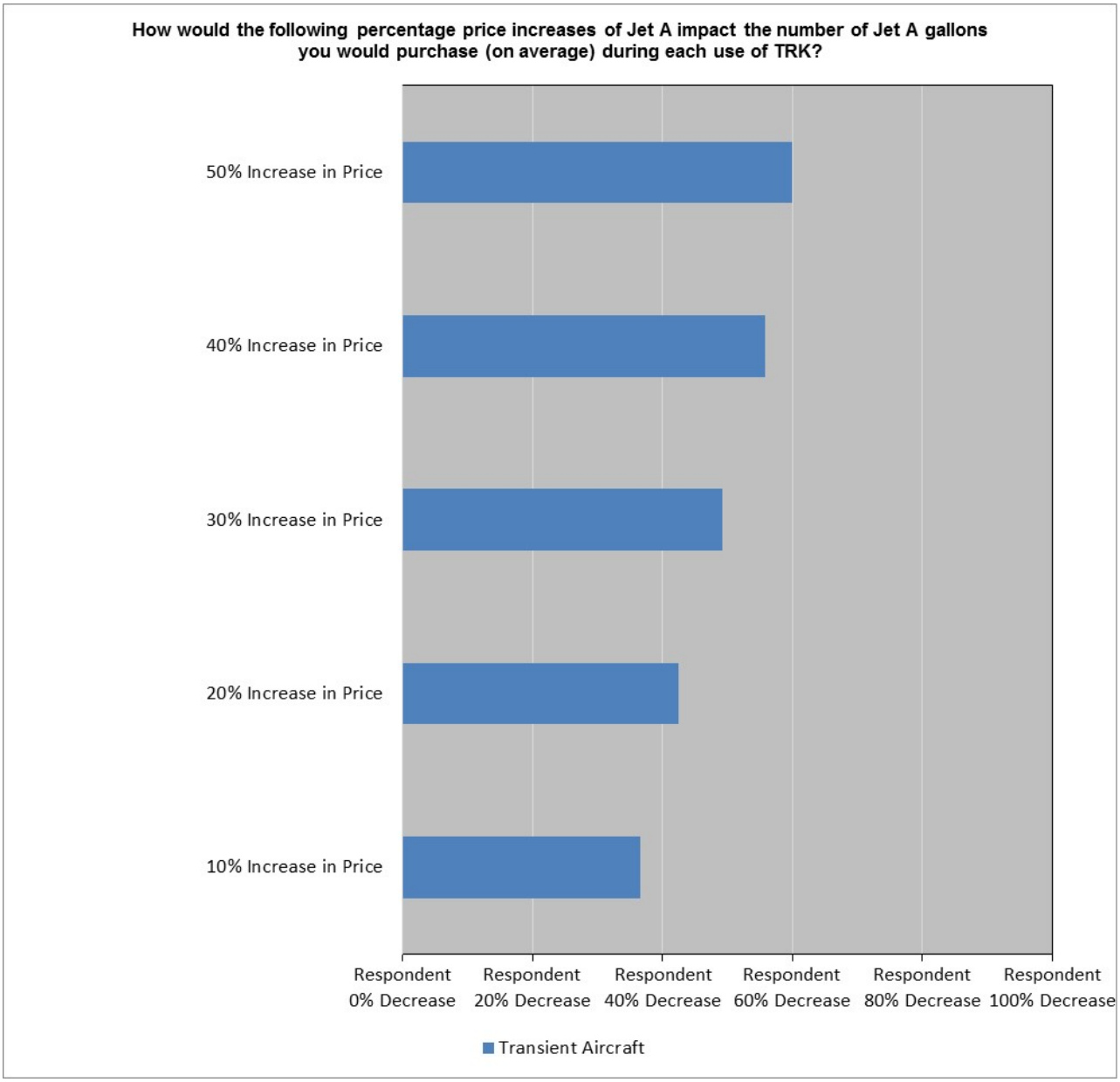

What impact would the following scenarios have on the number of aircraft landings you have at TRK?
Decreased Runway Length
Decreased Runway Width
Decreased Runway Weight Bearing Capacity
Full Service Fueling Only
Self Service Fueling Only
No Fueling Services
Elimination of Aircraft Towing
Elimination of Ground Power
Elimination of Start Carts
Elimination of Aircraft Cleaning
Elimination of Aircraft Catering
Elimination of Lavatory Services
Elimination of Aircraft Maintenance...
Elimination of ARFF (Capabilities)
Elimination of Snow Removal (Capabilities)
Elimination of On-Airport Restaurant
Elimination of On-Airport Recreation Trails
Elimination of On-Airport Campsites
Respondent 0% Decrease
Respondent 20% Decrease
Respondent 40% Decrease
Respondent 60% Decrease
Respondent 80% Decrease
Respondent 100% Decrease
Transient Aircraft
Based Aircraft
Combined

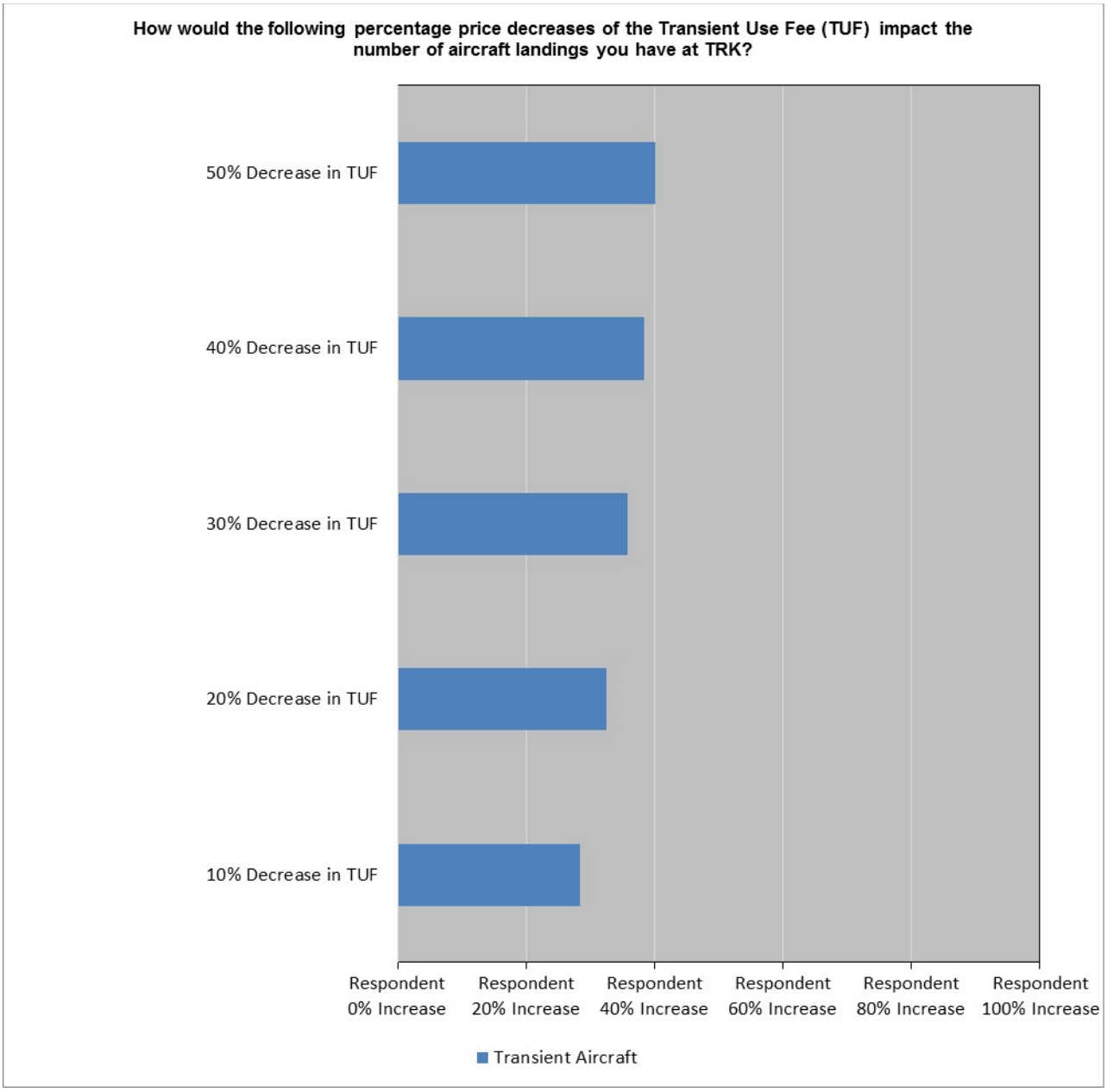

If you have (in the past) or plan (in the future) on using another airport other than TRK when flying to the Lake Tahoe area, what attributes would change your destination airport to TRK? (mark all that apply)
Increased Runway Length
Increased Runway Width
Increased Runway Weight Bearing Capacity
Tower Controller during Peak Periods
Availability of Clearance Delivery
Enhanced IFR Approach Procedures
Enhanced IFR Departure Procedures
Aircraft Deicing Services
Enhanced (Full-Service) On-Airport Camping
Other
0.00%
20.00%
40.00%
60.00%
80.00%
100.00%
Transient Aircraft

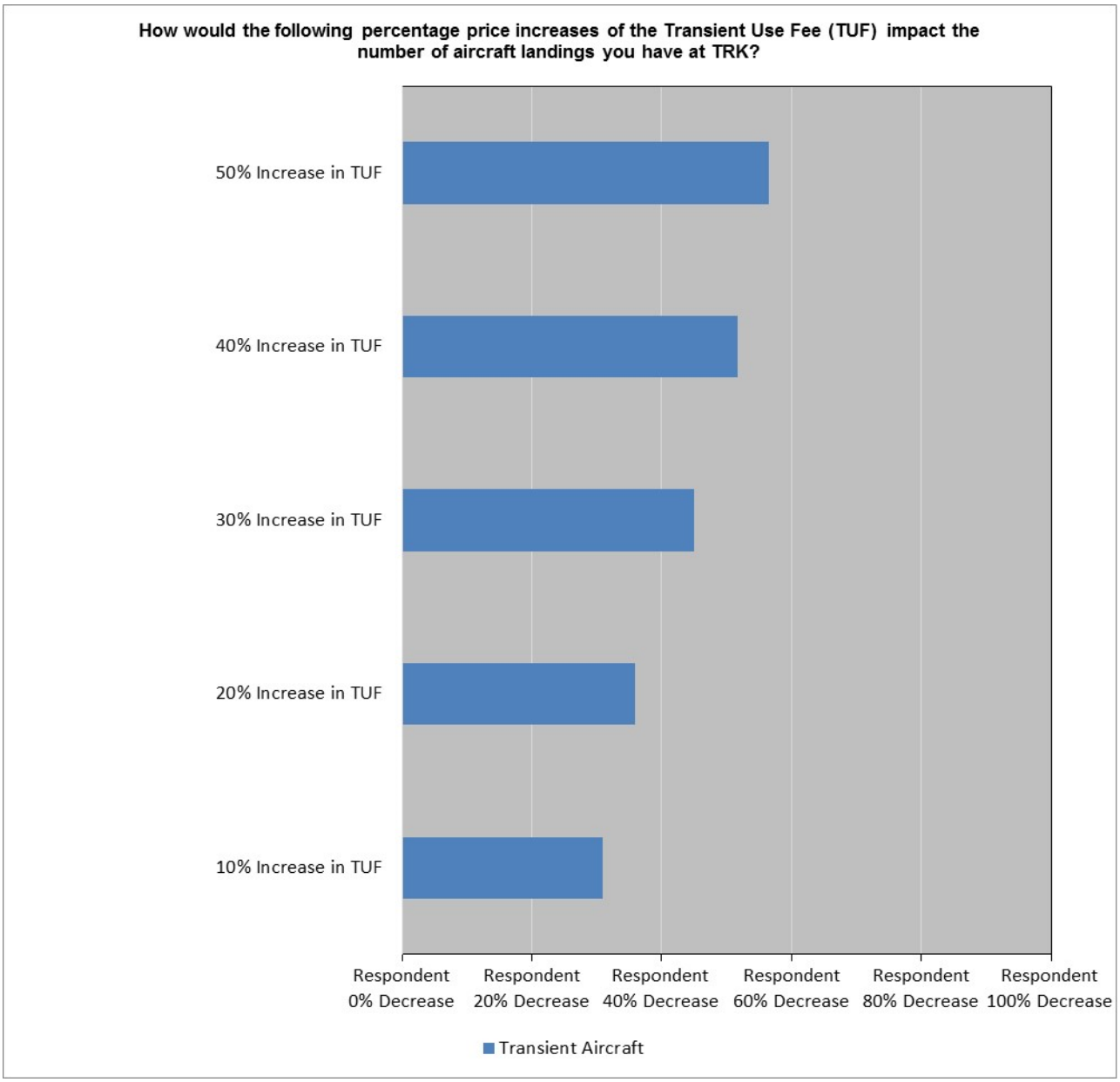

How would the following percentage price decreases of Jet A impact the number of aircraft landings you have at TRK?
50% Decrease in Price
40% Decrease in Price
30% Decrease in Price
20% Decrease in Price
10% Decrease in Price
Respondent 0% Increase
Respondent 20% Increase
Respondent 40% Increase
Respondent 60% Increase
Respondent 80% Increase
Respondent 100% Increase
Transient Aircraft


How would the following percentage price increases of Jet A impact the number of aircraft landings you have at TRK?
50% Increase in Price
40% Increase in Price
30% Increase in Price
20% Increase in Price
10% Increase in Price
Respondent 0% Decrease
Respondent 20% Decrease
Respondent 40% Decrease
Respondent 60% Decrease
Respondent 80% Decrease
Respondent 100% Decrease
Transient Aircraft


How would the following percentage price decreases of Jet A impact the number of Jet A gallons you would purchase (on average) during each use of TRK?
50% Decrease in Price
40% Decrease in Price
30% Decrease in Price
20% Decrease in Price
10% Decrease in Price
Respondent 0% Increase
Respondent 20% Increase
Respondent 40% Increase
Respondent 60% Increase
Respondent 80% Increase
Respondent 100% Increase
Transient Aircraft


How would the following percentage price increases of Jet A impact the number of Jet A gallons you would purchase (on average) during each use of TRK?
50% Increase in Price
40% Increase in Price
30% Increase in Price
20% Increase in Price
10% Increase in Price
Respondent 0% Decrease
Respondent 20% Decrease
Respondent 40% Decrease
Respondent 60% Decrease
Respondent 80% Decrease
Respondent 100% Decrease
Transient Aircraft


How would the following percentage price decreases of the Transient Use Fee (TUF) impact the number of aircraft landings you have at TRK?
50% Decrease in TUF
40% Decrease in TUF
30% Decrease in TUF
20% Decrease in TUF
10% Decrease in TUF
Respondent 0% Increase
Respondent 20% Increase
Respondent 40% Increase
Respondent 60% Increase
Respondent 80% Increase
Respondent 100% Increase
Transient Aircraft



Transient Aircraft Survey

What type of aircraft do you own/operate?

1. Piston Single Engine
2. Piston Multi Engine
3. Turboprop Single Engine
4. Turboprop Multi Engine
5. Jet (less than 12,500 pounds MTOW)
6. Jet (12,500 to 19,999 pounds MTOW)
7. Jet (20,000 to 49,999 pounds MTOW)
8. Jet (more than 50,000 MTOW)

How do you operate your aircraft?

1. Part 91
2. Part 91K

3. Part 135
4. Other

How many average landings per month do you make at TRK during winter and spring months (Nov to Apr)?

How many average landings per month do you make at TRK during summer and fall months (May to Oct)?

Which month of the year do you have the most landings at TRK?

1. January
2. February
3. March
4. April
5. May
6. June
7. July
8. August
9. September
10. October
11. November
12. December

During the peak month, how many landings (on average) do you make at TRK?

Do you, the aircraft owner, or your primary passengers own a primary residence in the Truckee/Lake Tahoe area?

1. Yes
2. No

How close is the primary residence to TRK?

1. 1 to 5 miles
2. 5 to 10 miles
3. 11 to 15 miles
4. 16 to 20 miles
5. 21 to 25 miles
6. 26 to 30 miles
7. 31 to 35 miles
8. 36 or more miles

Do you, the aircraft owner, or your primary passengers own a secondary residence in the Truckee/Lake Tahoe area?

1. Yes
2. NoHow close is the secondary residence to TRK?

1. 1 to 5 miles
2. 5 to 10 miles
3. 11 to 15 miles
4. 16 to 20 miles
5. 21 to 25 miles
6. 26 to 30 miles
7. 31 to 35 miles
8. 36 or more miles

Are you, the aircraft owner, or your primary passenger's owners of a business in the Truckee/Lake Tahoe area?

1. Yes
2. No

How close is the business to TRK?

1. 1 to 5 miles
2. 5 to 10 miles
3. 11 to 15 miles
4. 16 to 20 miles
5. 21 to 25 miles
6. 26 to 30 miles
7. 31 to 35 miles
8. 36 or more miles

Do you, the aircraft owner, or your primary passengers do business in the Truckee/Lake Tahoe area?

1. Yes
2. No

How close is the business to TRK?

1. 1 to 5 miles
2. 5 to 10 miles
3. 11 to 15 miles
4. 16 to 20 miles
5. 21 to 25 miles
6. 26 to 30 miles
7. 31 to 35 miles
8. 36 or more miles

Is TRK your preferred airport in the Truckee/Lake Tahoe area?

1. Yes
2. No

If not TRK, which is your preferred airport in the Truckee/Lake Tahoe area?

1. Reno/Tahoe International Airport
2. Carson Airport
3. Reno/Stead Airport
4. Minden-Tahoe Airport
5. South Lake Tahoe Airport
6. Nevada County Airpark (Grass Valley)
7. Nervino Airport

What are the primary attributes of the other airports that make them a preferred airport?

Please rate each of the following existing airport attributes based on their importance for the reason you selected TRK as your preferred airport:

	Absolute Necessity	Very Important	Somewhat Important	Less Important	Not Important	N/A
Location to Local Residence	☐	☐	☐	☐	☐	☐
Location to Business/Customers	☐	☐	☐	☐	☐	☐
Location to Lake Tahoe	☐	☐	☐	☐	☐	☐
Location to Ski Resorts	☐	☐	☐	☐	☐	☐
General Aviation Terminal	☐	☐	☐	☐	☐	☐
Aircraft Storage (Availability)	☐	☐	☐	☐	☐	☐
Aircraft Storage (Pricing)	☐	☐	☐	☐	☐	☐
Number and Type of Approach Procedures	☐	☐	☐	☐	☐	☐
Number and Type of Departure Procedures	☐	☐	☐	☐	☐	☐
Runway Length	☐	☐	☐	☐	☐	☐
Runway Width	☐	☐	☐	☐	☐	☐
Runway Weight Bearing Capacity	☐	☐	☐	☐	☐	☐
Full Service Fueling (Availability)	☐	☐	☐	☐	☐	☐
Self Service Fueling (Availability)	☐	☐	☐	☐	☐	☐
Fuel Service (Pricing)	☐	☐	☐	☐	☐	☐

Aircraft Towing (Availability)	☐	☐	☐	☐	☐	☐
Ground Power (Availability)	☐	☐	☐	☐	☐	☐
Start Carts (Availability)	☐	☐	☐	☐	☐	☐
Aircraft Cleaning (Availability)	☐	☐	☐	☐	☐	☐
Aircraft Catering (Availability)	☐	☐	☐	☐	☐	☐
Lavatory Services (Availability)	☐	☐	☐	☐	☐	☐
Aircraft Maintenance & Repair (Availability)	☐	☐	☐	☐	☐	☐
ARFF (Capabilities)	☐	☐	☐	☐	☐	☐
Snow Removal (Capabilities)	☐	☐	☐	☐	☐	☐
Wildlife Control Initiatives	☐	☐	☐	☐	☐	☐
On-Airport Restaurant	☐	☐	☐	☐	☐	☐
On-Airport Recreation Trails	☐	☐	☐	☐	☐	☐
On-Airport Campsites	☐	☐	☐	☐	☐	☐

What impact would the following scenarios have on the number of aircraft landings you have at TRK?

	0% Increase	20% Increase	40% Increase	60% Increase	80% Increase	100% Increase
Increased Runway Length	☐	☐	☐	☐	☐	☐
Increased Runway Width	☐	☐	☐	☐	☐	☐
Increased Runway Weight Bearing Capacity	☐	☐	☐	☐	☐	☐
Tower Controller during Peak Periods	☐	☐	☐	☐	☐	☐
Availability of Clearance Delivery	☐	☐	☐	☐	☐	☐
Enhanced IFR Approach Procedures	☐	☐	☐	☐	☐	☐
Enhanced IFR Departure Procedures	☐	☐	☐	☐	☐	☐
Aircraft Deicing Services/Equipment	☐	☐	☐	☐	☐	☐
Aircraft Hangar for Pre-heat and/or Deicing	☐	☐	☐	☐	☐	☐
Enhanced (Full-Service) On-Airport Camping	☐	☐	☐	☐	☐	☐

What impact would the following scenarios have on the number of aircraft landings you have at TRK?

	0% Decrease	20% Decrease	40% Decrease	60% Decrease	80% Decrease	100% Decrease
Decreased Runway Length	☐	☐	☐	☐	☐	☐
Decreased Runway Width	☐	☐	☐	☐	☐	☐
Decreased Runway Weight Bearing Capacity	☐	☐	☐	☐	☐	☐
Full Service Fueling Only	☐	☐	☐	☐	☐	☐
Self Service Fueling Only	☐	☐	☐	☐	☐	☐
No Fueling Services	☐	☐	☐	☐	☐	☐
Elimination of Aircraft Towing	☐	☐	☐	☐	☐	☐
Elimination of Ground Power	☐	☐	☐	☐	☐	☐
Elimination of Start Carts	☐	☐	☐	☐	☐	☐
Elimination of Aircraft Cleaning	☐	☐	☐	☐	☐	☐
Elimination of Aircraft Catering	☐	☐	☐	☐	☐	☐
Elimination of Lavatory Services	☐	☐	☐	☐	☐	☐
Elimination of Aircraft Maintenance & Repair	☐	☐	☐	☐	☐	☐
Elimination of ARFF (Capabilities)	☐	☐	☐	☐	☐	☐
Elimination of Snow Removal (Capabilities)	☐	☐	☐	☐	☐	☐
Elimination of On-Airport Restaurant	☐	☐	☐	☐	☐	☐
Elimination of On-Airport Recreation Trails	☐	☐	☐	☐	☐	☐
Elimination of On-Airport Campsites	☐	☐	☐	☐	☐	☐

If you have (in the past) or plan (in the future) on using another airport other than TRK when flying to the Lake Tahoe area, what attributes would change your destination airport to TRK (mark all that apply).

1. Increased Runway Length
2. Increased Runway Width
3. Increased Runway Weight Bearing Capacity
4. Tower Controller during Peak Periods
5. Availability of Clearance Delivery
6. Enhanced IFR Approach Procedures
7. Enhanced IFR Departure Procedures
8. Aircraft Deicing Services
9. Enhanced (Full-Service) On-Airport Camping
10. Other

How would the following percentage price decreases of Jet A impact the number of aircraft landings you have at TRK?

	0% Increase	20% Increase	40% Increase	60% Increase	80% Increase	100% Increase
10% Decrease in Price	☐	☐	☐	☐	☐	☐
20% Decrease in Price	☐	☐	☐	☐	☐	☐
30% Decrease in Price	☐	☐	☐	☐	☐	☐
40% Decrease in Price	☐	☐	☐	☐	☐	☐
50% Decrease in Price	☐	☐	☐	☐	☐	☐

How would the following percentage price increases of Jet A impact the number of aircraft landings you have at TRK?

	0% Decrease	20% Decrease	40% Decrease	60% Decrease	80% Decrease	100% Decrease
10% Increase in Price	☐	☐	☐	☐	☐	☐
20% Increase in Price	☐	☐	☐	☐	☐	☐
30% Increase in Price	☐	☐	☐	☐	☐	☐
40% Increase in Price	☐	☐	☐	☐	☐	☐
50% Increase in Price	☐	☐	☐	☐	☐	☐

How would the following percentage price decreases of Jet A impact the number of Jet A gallons you would purchase (on average) during each use TRK?

	0% Increase	20% Increase	40% Increase	60% Increase	80% Increase	100% Increase
10% Decrease in Price	☐	☐	☐	☐	☐	☐
20% Decrease in Price	☐	☐	☐	☐	☐	☐
30% Decrease in Price	☐	☐	☐	☐	☐	☐
40% Decrease in Price	☐	☐	☐	☐	☐	☐
50% Decrease in Price	☐	☐	☐	☐	☐	☐

How would the following percentage price increases of Jet A impact the number of Jet A gallons you would purchase (on average) during each use TRK?

	0% Decrease	20% Decrease	40% Decrease	60% Decrease	80% Decrease	100% Decrease
10% Increase in Price	☐	☐	☐	☐	☐	☐
20% Increase in Price	☐	☐	☐	☐	☐	☐
30% Increase in Price	☐	☐	☐	☐	☐	☐
40% Increase in Price	☐	☐	☐	☐	☐	☐
50% Increase in Price	☐	☐	☐	☐	☐	☐

How would the following percentage price decreases of the Transient Use Fee (TUF) impact the number of aircraft landings you have at TRK?

	0% Increase	20% Increase	40% Increase	60% Increase	80% Increase	100% Increase
10% Decrease in TUF	☐	☐	☐	☐	☐	☐
20% Decrease in TUF	☐	☐	☐	☐	☐	☐
30% Decrease in TUF	☐	☐	☐	☐	☐	☐
40% Decrease in TUF	☐	☐	☐	☐	☐	☐
50% Decrease in TUF	☐	☐	☐	☐	☐	☐

How would the following percentage price increases of the Transient Use Fee (TUF) impact the number of aircraft landings you have at TRK?

	0% Decrease	20% Decrease	40% Decrease	60% Decrease	80% Decrease	100% Decrease
10% Increase in TUF	☐	☐	☐	☐	☐	☐
20% Increase in TUF	☐	☐	☐	☐	☐	☐
30% Increase in TUF	☐	☐	☐	☐	☐	☐
40% Increase in TUF	☐	☐	☐	☐	☐	☐
50% Increase in TUF	☐	☐	☐	☐	☐	☐

Based Aircraft Survey

What type of aircraft do you own/operate?

1. Piston Single Engine
2. Piston Multi Engine
3. Turboprop Single Engine
4. Turboprop Multi Engine
5. Jet (less than 12,500 pounds MTOW)
6. Jet (12,500 to 19,999 pounds MTOW)
7. Jet (20,000 to 49,999 pounds MTOW)
8. Jet (more than 50,000 MTOW)

How do you operate your aircraft?

1. Part 91
2. Part 91K
3. Part 135
4. Other

Select which one applies to you and your aircraft.

1. Aircraft is permanently based at TRK (e.g., do not have an aircraft storage facility at another airport)?
2. Aircraft is not permanently based at TRK (e.g., in addition to aircraft storage facility at TRK, have an aircraft storage facility at another airport)?
3. On TRK Aircraft Storage Facility Wait List (e.g., do not have an aircraft storage facility at TRK)

What type of aircraft storage facility to you rent/utilize at other airport(s)?

1. Apron
2. Tiedown
3. T-Hangar
4. Executive Hangar
5. Corporate Hangar
6. Community Hangar
7. Other

What type of aircraft storage facility do you rent at TRK?

1. Apron
2. Tiedown
3. T-Hangar
4. Executive Hangar
5. Other

Are you on the TRK Aircraft Storage Facility Wait List for a different type of aircraft storage facility or do you desire a different type of aircraft storage facility from your current?

1. Yes
2. No

What type of aircraft storage facility would you like to rent at TRK?

1. Apron
2. Tiedown
3. T-Hangar
4. Executive Hangar
5. Other

How many average landings per month do you make at TRK during winter and spring months (Nov to Apr)?

How many average landings per month do you make at TRK during summer and fall months (May to Oct)?

Which month of the year do you have the most landings at TRK?

1. January
2. February
3. March
4. April
5. May
6. June
7. July
8. August
9. September
10. October
11. November
12. December

During the peak month, how many landings (on average) do you make at TRK?

Is your primary residence in the Truckee/Lake Tahoe area?

1. Yes
2. No

How close is your primary residence to TRK?

1. 1 to 5 miles
2. 5 to 10 miles
3. 11 to 15 miles
4. 16 to 20 miles
5. 21 to 25 miles
6. 26 to 30 miles
7. 31 to 35 miles
8. 36 or more miles

Is your secondary residence in the Truckee/Lake Tahoe area?

1. Yes
2. No

How close is your secondary residence to TRK?

1. 1 to 5 miles
2. 5 to 10 miles
3. 11 to 15 miles
4. 16 to 20 miles
5. 21 to 25 miles
6. 26 to 30 miles
7. 31 to 35 miles
8. 36 or more miles

Do you own a business in the Truckee/Lake Tahoe area?

1. Yes
2. No

How close is your business to TRK?

1. 1 to 5 miles
2. 5 to 10 miles
3. 11 to 15 miles
4. 16 to 20 miles
5. 21 to 25 miles
6. 26 to 30 miles
7. 31 to 35 miles
8. 36 or more miles

Are you employed at a business in the Truckee/Lake Tahoe area?

1. Yes
2. No

How close is your business to TRK?

1. 1 to 5 miles
2. 5 to 10 miles
3. 11 to 15 miles
4. 16 to 20 miles
5. 21 to 25 miles
6. 26 to 30 miles
7. 31 to 35 miles
8. 36 or more miles

Do you do business in the Truckee/Lake Tahoe area?

1. Yes
2. No

How close is the business to TRK?

1. 1 to 5 miles
2. 5 to 10 miles
3. 11 to 15 miles
4. 16 to 20 miles
5. 21 to 25 miles
6. 26 to 30 miles
7. 31 to 35 miles
8. 36 or more miles

Before selecting TRK as your preferred airport to base your aircraft, what other airports (up to 3) did you consider?

1. Reno/Tahoe International Airport
2. Carson Airport
3. Reno/Stead Airport
4. Minden-Tahoe Airport
5. South Lake Tahoe Airport
6. Nevada County Airpark (Grass Valley)
7. Nervino Airport
8. Other Airport

What were the primary attributes of the other airports that made them a consideration?

Please rate each of the following existing airport attributes based on their importance for the reason you selected TRK to base your aircraft at the Airport:

	Absolute Necessity	Very Important	Somewhat Important	Less Important	Not Important	N/A
Location to Local Residence	☐	☐	☐	☐	☐	☐
Location to Business/Customers	☐	☐	☐	☐	☐	☐
Location to Lake Tahoe	☐	☐	☐	☐	☐	☐
Location to Ski Resorts	☐	☐	☐	☐	☐	☐
General Aviation Terminal	☐	☐	☐	☐	☐	☐
Aircraft Storage (Availability)	☐	☐	☐	☐	☐	☐
Aircraft Storage (Pricing)	☐	☐	☐	☐	☐	☐
Number and Type of Approach Procedures	☐	☐	☐	☐	☐	☐
Number and Type of Departure Procedures	☐	☐	☐	☐	☐	☐
Runway Length	☐	☐	☐	☐	☐	☐
Runway Width	☐	☐	☐	☐	☐	☐
Runway Weight Bearing Capacity	☐	☐	☐	☐	☐	☐
Full Service Fueling (Availability)	☐	☐	☐	☐	☐	☐
Self Service Fueling (Availability)	☐	☐	☐	☐	☐	☐
Fuel Service (Pricing)	☐	☐	☐	☐	☐	☐
Aircraft Towing (Availability)	☐	☐	☐	☐	☐	☐
Ground Power (Availability)	☐	☐	☐	☐	☐	☐
Start Carts (Availability)	☐	☐	☐	☐	☐	☐
Aircraft Cleaning (Availability)	☐	☐	☐	☐	☐	☐
Aircraft Catering (Availability)	☐	☐	☐	☐	☐	☐
Lavatory Services (Availability)	☐	☐	☐	☐	☐	☐
Aircraft Maintenance & Repair (Availability)	☐	☐	☐	☐	☐	☐

ARFF (Capabilities)	☐	☐	☐	☐	☐	☐
Snow Removal (Capabilities)	☐	☐	☐	☐	☐	☐
Wildlife Control Initiatives	☐	☐	☐	☐	☐	☐
On-Airport Restaurant	☐	☐	☐	☐	☐	☐
On-Airport Recreation Trails	☐	☐	☐	☐	☐	☐
On-Airport Campsites	☐	☐	☐	☐	☐	☐

What impact would the following scenarios have on the number of aircraft landings you have at TRK?

	0% Increase	20% Increase	40% Increase	60% Increase	80% Increase	100% Increase
Increased Runway Length	☐	☐	☐	☐	☐	☐
Increased Runway Width	☐	☐	☐	☐	☐	☐
Increased Runway Weight Bearing Capacity	☐	☐	☐	☐	☐	☐
Tower Controller during Peak Periods	☐	☐	☐	☐	☐	☐
Availability of Clearance Delivery	☐	☐	☐	☐	☐	☐
Enhanced IFR Approach Procedures	☐	☐	☐	☐	☐	☐
Enhanced IFR Departure Procedures	☐	☐	☐	☐	☐	☐
Aircraft Deicing Services	☐	☐	☐	☐	☐	☐
Enhanced (Full-Service) On-Airport Camping	☐	☐	☐	☐	☐	☐

What impact would the following scenarios have on the number of aircraft landings you have at TRK?

	0% Decrease	20% Decrease	40% Decrease	60% Decrease	80% Decrease	100% Decrease
Decreased Runway Length	☐	☐	☐	☐	☐	☐
Decreased Runway Width	☐	☐	☐	☐	☐	☐
Decreased Runway Weight Bearing Capacity	☐	☐	☐	☐	☐	☐
Full Service Fueling Only	☐	☐	☐	☐	☐	☐
Self Service Fueling Only	☐	☐	☐	☐	☐	☐
No Fueling Services	☐	☐	☐	☐	☐	☐
Elimination of Aircraft Towing	☐	☐	☐	☐	☐	☐
Elimination of Ground Power	☐	☐	☐	☐	☐	☐
Elimination of Start Carts	☐	☐	☐	☐	☐	☐
Elimination of Aircraft Cleaning	☐	☐	☐	☐	☐	☐
Elimination of Aircraft Catering	☐	☐	☐	☐	☐	☐
Elimination of Lavatory Services	☐	☐	☐	☐	☐	☐
Elimination of Aircraft Maintenance & Repair	☐	☐	☐	☐	☐	☐
Elimination of ARFF (Capabilities)	☐	☐	☐	☐	☐	☐
Elimination of Snow Removal (Capabilities)	☐	☐	☐	☐	☐	☐
Elimination of On-Airport Restaurant	☐	☐	☐	☐	☐	☐
Elimination of On-Airport Recreation Trails	☐	☐	☐	☐	☐	☐
Elimination of On-Airport Campsites	☐	☐	☐	☐	☐	☐

DEMAND DRIVERS STUDY

Appendix

Appendix D. **NON-AVIATION MARKET ASSESSMENT**

Appendix D. NON-AVIATION MARKET ASSESSMENT

Between September 28 and October 7, 2015, discussion occurred with 15 local leaders to gain an understanding of their perspective on the topics related to demand drivers of aviation at TRK. The discussions focused on the local leader's perceptions of what brings customers and constituents to the region, how they get to the area, along with perceived trends, influences and predictions for future Airport use.

Interviewees represented Chase International, Martis Camp, Oliver Real Estate, the Truckee Donner Chamber of Commerce, Tahoe Mountain Club, Town of Truckee, and Resort at Squaw Creek, Glenshire Devonshire Residents Association, Lahontan Community Association, Sugar Bowl Ski Resort, Mountain Area Preservation, Incline Village Visitors Association, North Lake Tahoe Resort Association, Carr Long Real Estate and Mountainside Partners. On-the-ground TRK operations staff were also interviewed to give their thoughts on people using the Airport. The following questions were asked:

- Who their constituency or customer base is?
- Why they visit the Truckee/Tahoe region?
- How they get to the area?
- If their constituency use the Airport?
- If their constituency use the Airport more or less than 10 years ago, what has driven that trend (internal or external to the Airport District)
- What might drive an increase or decrease in operations at TRK in the future?

The following tables present the answers from each organization (N/A signifies no answer was provided).

Figure D-1: How Would You Define Your Constituency/Customer Base?

Organization	Answer
Chase International	Real estate customers: local residents and 2nd homeowners.
Martis Camp	300 built homes with 100 under construction.
Oliver Real Estate	80 percent are 2nd home owners from the Bay Area.
Truckee Chamber	Hotel customers, visitors, 2nd homeowners
Tahoe Mountain Club	People not from Truckee Area, from Bay Area. Affluent.
Town of Truckee	Primary residents and second home owners within diverse economic sectors.
Resort at Squaw Creek	Hotel visitors, mostly from the Bay Area.
Glenshire Devonshire Residents Assoc.	80 percent are full time residents.
Lahontan Community Association	Majority are affluent 2nd homeowners (40 of 240 built are full time).
Sugar Bowl	Second homeowners and their guests.
Mountain Area Preservation	Membership base: Locals, second homeowners (30%), 50 yrs. old + up, retirees but working on engaging younger families.
Incline Village Visitors Association	Incline Village / Crystal Bay tourism businesses (non-membership based), lodging businesses, rental houses, VBRO.
Carr Long Real Estate	Young families from the Bay Area, second homeowners, wealthy.
North Lake Tahoe Resort Association	Visitors and businesses who serve visitors in North Lake Tahoe, Squaw Valley, North Star, and Donner Summit.
Mountainside Partners	90 percent second homeowners, $2M entry level price for houses. Most are from Silicon Valley, but seeing more from LA. High end cash buyers. Want and expect luxury.
TTAD Staff	• Today: vacationers, 2nd homeowners, people coming in for business (architects, engineers, etc.) • Changes: used to be more small planes, local pilots, military trainings • Today: younger crowd • Today: 50-70 year olds, corporate people

Figure D-2: What Brings Your Constituency To The Truckee-North Tahoe Area?

Organization	Answer
Chase International	Year-round recreation, ease of access (driving and flying), weather.
Martis Camp	Year-round family lifestyle.
Oliver Real Estate	Recreation and proximity to the Bay Area.
Truckee Chamber	Location and environment.
Tahoe Mountain Club	Second homes.
Town of Truckee	Truckee lifestyle.
Resort at Squaw Creek	Squaw Valley & Tahoe region.
Glenshire Devonshire Residents Assoc.	Glenshire's community, affordable housing for locals.
Lahontan Community Association	Affiliation with the golf club and Tahoe outdoor recreation at large.
Sugar Bowl	Sugar Bowl Resort.
Mountain Area Preservation	Quality of life, simplicity, access to nature.
Incline Village Visitors Association	Recreation, vacation in Lake Tahoe.
Carr Long Real Estate	Skiing.
North Lake Tahoe Resort Association	Recreation, scenic.
Mountainside Partners	Hiking, skiing, “cabin in the woods,” that is 100% luxurious. The summer experience is more popular now.
TTAD Staff	• Events, vacation, golf, business • Events: triathlons, Ironman, golf tournaments, ski races, tough mudder, Burning Man • Summer climate: more people come in summer

Figure D-3: How Does The Majority Of Your Constituency Travel To The Area?

Organization	Answer
Chase International	Driving (5-10 percent flying).
Martis Camp	40 percent fly sometimes to the Truckee Airport, 25 percent almost always.
Oliver Real Estate	Driving.
Truckee Chamber	Majority driving.
Tahoe Mountain Club	90 percent drive 10 percent fly.
Town of Truckee	Less than 5 percent fly, majority private auto.
Resort at Squaw Creek	70 percent drive from Bay Area, remainder fly into Reno.
Glenshire Devonshire Residents Assoc.	Driving.
Lahontan Community Association	Driving, but maybe around a quarter fly.
Sugar Bowl	75 percent drive, 25 percent fly.
Mountain Area Preservation	By car: from Bay Area.
Incline Village Visitors Association	By car.
Carr Long Real Estate	By car.
North Lake Tahoe Resort Association	By car.
Mountainside Partners	25 percent will use TRK and 65 percent will drive or fly to Reno. LA crowd is flying in to avoid drive to Mammoth.
TTAD Staff	• N/A

Figure D-4: Have you seen a change in the method of travel in the last 10 years? What do you think has driven the change?

Organization	Answer
Chase International	Not customer base. In general there seems to be an increase in aircraft operations.
Martis Camp	15 percent increase in use of airport, driven by completion of homes.
Oliver Real Estate	Not within customer base. General increase in flights.
Truckee Chamber	Increase in flights up from maybe a 95\5 percent split 10 years ago to 85\15 percent split today.
Tahoe Mountain Club	Maybe some increase in flying.
Town of Truckee	Yes, decreased overall flight - mostly decreased prop, some increase in jet.
Resort at Squaw Creek	No.
Glenshire Devonshire Residents Assoc.	No.
Lahontan Community Association	Yes, increased maybe 5 to 10 percent flying into TRK.
Sugar Bowl	No.
Mountain Area Preservation	No.
Incline Village Visitors Association	No.
Carr Long Real Estate	No.
North Lake Tahoe Resort Association	No. We are trying to bolster air travel to RNO and Sacramento but people still mostly drive here.
Mountainside Partners	I-80 traffic has gotten so bad over the past 5 years that people with means are looking for options to avoid this.
TTAD Staff	• N/A

Figure D-5: Does your constituency fly-in/fly-out of the Truckee Tahoe Airport?

Organization	Answer
Chase International	5 to 10 percent.
Martis Camp	Yes (25 to 40 perent).
Oliver Real Estate	Less than 10 percent.
Truckee Chamber	5-15 percent.
Tahoe Mountain Club	Yes, maybe 10 percent.
Town of Truckee	Less than 5 percent.
Resort at Squaw Creek	Very minimal, only one comes to mind.
Glenshire Devonshire Residents Assoc.	Very few pilots.
Lahontan Community Association	Yes.
Sugar Bowl	Yes.
Mountain Area Preservation	No (Surf Air as auction item at last event was a flop).
Incline Village Visitors Association	N/A.
Carr Long Real Estate	No.
North Lake Tahoe Resort Association	No, only the very wealthy set.
Mountainside Partners	25 percent will use TRK.
TTAD Staff	• N/A

Figure D-6: Have You Seen A Change In This Use Of The Airport In The Last 10 Years? What Do You Think Has Driven The Change?

Organization	Answer
Chase International	Changes external to the airport - KSL and Vail Resorts bringing in more long-haul national and international visitors.
Martis Camp	See previous.
Oliver Real Estate	Yes, increasing with luxury golf course communities, particularly around North Star, growth in luxury real estate market, and affluence of Bay Area customers.
Truckee Chamber	Surf Air and charter services, small improvements like bikes at the Airport.
Tahoe Mountain Club	Potential increase due to services like Surf Air.
Town of Truckee	Gone down, particularly in prop planes.
Resort at Squaw Creek	No.
Glenshire Devonshire Residents Assoc.	No.
Lahontan Community Association	Increase, economics.
Sugar Bowl	No.
Mountain Area Preservation	Yes. More use. More air travel, especially during the summer and holiday. Seems like there have been more events but not sure. Last 5 years I have been attended more meetings at the Airport terminal.
Incline Village Visitors Association	Yes. Airport has become more visible in the business and tourism side. Being involved in regional air service corporation (example).
Carr Long Real Estate	Yes, Martis Camp, Silicon Valley wealth impacts Truckee/Tahoe--we are an easy to access from Silicon Valley.
North Lake Tahoe Resort Association	Yes. Changes stem from wealth in the Bay Area and we have products (development and hotels, skiing, golf) that appeal to them. The rich are getting richer and that set likes the convenience of jet travel to the Truckee Airport over driving or flying to airport further away.
Mountainside Partners	Yes, absolutely more use, especially for business. Price of fuel contributes to increase in business use.
TTAD Staff	• Martis Camp, Lahonton, Ritz, businesses in Incline, Surf Air, Silicon Valley wealth--we are a direct correlation to wealth that grows in the Bay Area • Schedule: people who fly in for 2nd homes and vacation have flexible schedules so can come Thursday, leave Monday • More business use: people holding meetings at Airport, flying in for meetings for the day • Martis Camp/Lahonton has had huge impact on #'s, size and type of aircraft • Far less GA use, more corp. jet use, more expensive planes, more Cirrius' in the 100K-500K range versus $25K-100K range in the past

Figure D-7: Do You Think That There Have Been Any Changes At The Truckee Tahoe Airport That Have Caused Your Constituency To Use The Airport Facilities More?

Organization	Answer
Chase International	No.
Martis Camp	Yes.
Oliver Real Estate	Yes
Truckee Chamber	Yes.
Tahoe Mountain Club	Yes.
Town of Truckee	No.
Resort at Squaw Creek	N/A
Glenshire Devonshire Residents Assoc.	N/A
Lahontan Community Association	N/A
Sugar Bowl	N/A
Mountain Area Preservation	Yes.
Incline Village Visitors Association	N/A
Carr Long Real Estate	No. Terminal + Red Truck seem to drive visitors but can't say they are fly in people.
North Lake Tahoe Resort Association	N/A
Mountainside Partners	N/A
TTAD Staff	• N/A

Figure D-8: If Yes (To Previous Question), Please Specify Changes And Your Best Estimate Of Level Of Impact These Changes Have Caused On The Surrounding Community, If Any.

Organization	Answer
Chase International	N/A
Martis Camp	The longer runway has been a benefit, and deicing is on everyone's mind.
Oliver Real Estate	New terminal and TTAD creating public awareness of the ease of flying in and out of the Truckee Tahoe Airport.
Truckee Chamber	Time constraints, improving economy, ease of year-round flying, promotion of region, spill-over from Reno improvements, Truckee no longer in Tahoe's shadow.
Tahoe Mountain Club	Surf Air.
Town of Truckee	N/A
Resort at Squaw Creek	N/A
Glenshire Devonshire Residents Assoc.	N/A
Lahontan Community Association	N/A
Sugar Bowl	N/A
Mountain Area Preservation	The non-aviation uses planned, like Clear Capital, the free non-profit meeting room use, events at the Airport are driving use---not sure how this relates directly to flights but see more people at the Airport because of these activities and except this trend will continue.
Incline Village Visitors Association	N/A
Carr Long Real Estate	N/A
North Lake Tahoe Resort Association	N/A
Mountainside Partners	N/A
TTAD Staff	• N/A

Figure D-9: If You Think Your Constituency Uses The Airport Less Now Than In The Past, What Do You Think Has Caused This Change?

Organization	Answer
Chase International	N/A
Martis Camp	N/A
Oliver Real Estate	N/A
Truckee Chamber	N/A
Tahoe Mountain Club	N/A
Town of Truckee	Economics - a big portion of the last 10 years have been recession, cost of private plane ownership and use has gone up.
Resort at Squaw Creek	N/A
Glenshire Devonshire Residents Assoc.	N/A
Lahontan Community Association	N/A
Sugar Bowl	N/A
Mountain Area Preservation	N/A
Incline Village Visitors Association	N/A
Carr Long Real Estate	N/A
North Lake Tahoe Resort Association	Again, only the very wealthy use the Airport.
Mountainside Partners	N/A
TTAD Staff	• N/A

Figure D-10: For The Community In General (Not Just Your Constituency) What Do You Think Has Driven Demand At The Airport Over The Past 10 Years?

Organization	Answer
Chase International	Real estate development, especially during the low-interest period, new on-mountain projects at North Star & Squaw Valley.
Martis Camp	The growth in popularity of Truckee as a destination not just Tahoe - with new restaurants, tourist attractions, Truckee as a destination.
Oliver Real Estate	The recovery of the luxury real estate market starting in 2012 and the increase in wealth in the Bay Area tech industry.
Truckee Chamber	Real estate, improving economy, year-round promotion.
Tahoe Mountain Club	Real estate in the area, especially Martis Camp & Lahontan, wealthy clients fly instead of drive.
Town of Truckee	N/A
Resort at Squaw Creek	N/A
Glenshire Devonshire Residents Assoc.	High end developments like Martis Camp, Grays Crossing.
Lahontan Community Association	Economic, ease of use, proximity, fractional use flights.
Sugar Bowl	N/A
Mountain Area Preservation	Real estate, proximity to gated communities.
Incline Village Visitors Association	Income levels in the Bay Area lends to private plan services + planes in our area. Hassel of driving on I-80 might be driving people to use planes. The jet service offering are driving more flights.
Carr Long Real Estate	Martis Camp
North Lake Tahoe Resort Association	Stated earlier, wealth in the Bay spills over to jets at the local Airport. Also, the Airport has really done a good job reaching out in the community so more are aware of the services, which are very good! The staff and terminal are so professional, maybe this appeals to people and moves them to use the Airport more.
Mountainside Partners	Increase in business use. More coming for the summer now. Ritz building a beach club at Tahoe to accommodate for this luxury, growing market.
TTAD Staff	• N/A

Figure D-11: Do You Have An Opinion As To What Factors You Think Will Increase Or Decrease Use Of The Airport By Your Constituency In The Future?

Organization	Answer
Chase International	Weather (climate change), the housing market and national financial status.
Martis Camp	Deicing may decrease use because of repositioning, and more hangar space would allow for planes to be stored for a weekend.
Oliver Real Estate	As long as the Bay Area tech industry thrives, demand for the Airport will continue to rise.
Truckee Chamber	A better public transportation system once people arrive at the airport, second home owners bringing other visitors, remote workers bringing work events up.
Tahoe Mountain Club	Continued high-end development attracting more second home owners and remote-work primary homeowners using Airport for business and family.
Town of Truckee	Some high end second home development, limited to buildout of Grays Crossing and Old Greenwood within the Town of Truckee.
Resort at Squaw Creek	If commercial flights were provided to Truckee, that could affect Squaw Creek visitors.
Glenshire Devonshire Residents Assoc.	The economy, up or down, will increase or decrease traffic at the airport.
Lahontan Community Association	Economic factors.
Sugar Bowl	No.
Mountain Area Preservation	With non-aviation uses planned in the future, think there be more traffic, in the air and at the terminal--like Clear Capital. Perception is that Airport really wants to grow. There is general concern that Airport is growing too fast.
Incline Village Visitors Association	Clear Capital will have impacts on operations down the line. More activity, more traffic. Could be great partners on future events we want to bring to the area.
Carr Long Real Estate	Seems like more jets will come to Truckee in the future. More people aware of jets, of options to buy into services, how easy it is.
North Lake Tahoe Resort Association	I suspect that more people will use the Truckee Airport in the future. Tahoe will always be appealing to people, especially the wealthy. Now, home prices are so high only the very wealthy can afford them and this links to jet use, I believe. Also, it's no longer about second homeowners, these people (90% of them) are 3rd and 4th homeowners.
Mountainside Partners	Fractional products like SurfAir remind people of other options for transportation—even if they don't use SurfAir or other fractional air services, just knowing it is an options opens up alternative ways of getting to Tahoe.
TTAD Staff	• All external--high end home sales, gentrification of Truckee, events

DEMAND DRIVERS STUDY

Mead & Hunt

DEMAND DRIVERS STUDY

Mead &Hunt