

**THE ECONOMIC IMPACTS OF
VAN NUYS AIRPORT
ON THE LOCAL AND REGIONAL
ECONOMY**

Prepared for:
LOS ANGELES WORLD AIRPORTS

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EXECUTIVE SUMMARY

Van Nuys Airport, located in the San Fernando Valley, is ranked as the world's busiest general aviation airport, with nearly 395,000 operations annually and approximately 725 based aircraft. The Airport is an economic catalyst in Southern California and to estimate the economic impacts of Van Nuys Airport on the local economy, the Los Angeles World Airports (LAWA) retained the services of Martin Associates. The purpose of the study is to quantify the economic impacts generated by general aviation and passenger activity as well as non-aviation real estate activity at Van Nuys Airport.

In order to measure the impacts in the most defensible manner possible, the methodology utilized is based on detailed interviews with airport tenants, local economic data as well as airport statistics. The impacts, which are estimated for the Los Angeles metropolitan area (consisting of the City of Los Angeles, including a breakdown into each of the Community Plan Areas, and the counties of Los Angeles, Ventura, Santa Barbara, Orange, Kern, San Bernardino and Riverside), are quantified in terms of:

- ◆ ***Jobs;***
- ◆ ***Employee earnings;***
- ◆ ***Business revenue;***
- ◆ ***State & local taxes.***

The impacts are estimated for the general aviation and passenger activity, as well as for the non-aviation real estate activity at Van Nuys Airport for the calendar year 2006.

An airport-specific impact model was developed for the airport which can be used to estimate the impacts associated with capital construction and expansion projects, as well as to test the sensitivity of impacts to changes in airport activity.

The methodology used in this analysis has been developed by Martin Associates to estimate the economic impacts generated by airport activity at major airports such as Portland International Airport, Hartsfield-Atlanta International Airport, Washington DC's Ronald Reagan National Airport and Dulles International Airport, San Francisco International Airport, Sea-Tac International Airport, Sacramento International Airport, Miami International Airport, General Mitchell International Airport in Milwaukee, Baltimore/Washington International Airport, San Jose International Airport, Oakland International Airport and Minneapolis-St. Paul International Airport. This same methodology has also been used by Martin Associates to quantify the economic impacts of numerous general aviation airports throughout the United States including the 34 general aviation and commercial airports in the State of Maryland, the four





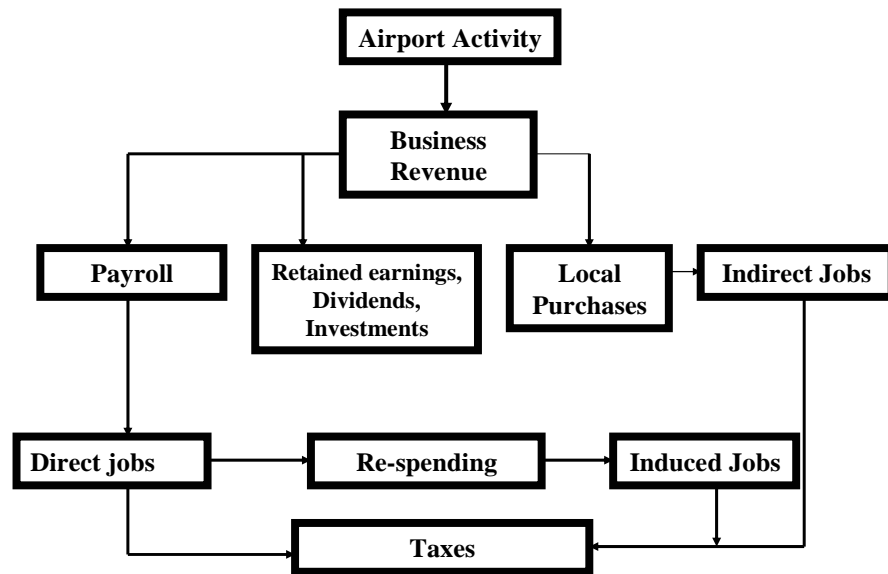
general aviation/limited commercial service airports in the Miami-Dade County Aviation System, Troutdale Airports in Portland (OR), Milwaukee's Lawrence J. Timmerman Airport, Lancaster (PA) Airport, and Reid-Hillview Airport in San Jose, California.

IMPACT STRUCTURE

Activity at an airport contributes to the local and state economy by generating business revenue for local and national firms providing air passenger service, general aviation services, and support services. These firms, in turn, provide employment and income to individuals and pay taxes to state and local governments. **Exhibit E-1**, on the following page, shows how aviation activity at Van Nuys Airport generates impacts throughout the local, state and national economy. As this exhibit indicates, the impact of an airport on a local or state economy cannot be reduced to a single number, but instead, airport activity creates several categories of impacts. These are the *employment impact*, *income and consumption impact*, *business revenue impact*, and *tax impact*. These impacts are not additive. For example, the income impact is a part of the revenue impact, and adding these impacts together would result in double counting.



Exhibit E-1
Flow of Economic Impacts Generated by
Airport Activity



Revenue Impact

At the outset, activity at the airport generates *business revenue* for firms which provide air passenger service, charter operations, maintenance, aircraft parts and supplies and ground support services. This business revenue impact is dispersed throughout the economy in several ways. It is used to hire people to provide the services, to purchase goods and services, to pay for the use of the airport and to make Federal, state and local tax payments.

The remainder is used to pay stockholders, retire debt, make investments, or is held as retained earnings. It is to be emphasized that the only portions of the revenue impact that can be definitely identified as remaining in the Los Angeles metropolitan regional area (including the counties of Los Angeles, Ventura, Santa Barbara, Orange, Kern, San Bernardino and Riverside) are those portions paid out in salaries to direct employees, local purchases from other firms, state and local taxes and payments to the airport itself. These local impacts are the only impacts identified in this analysis.





Employment Impact

The **employment impact** consists of three levels of job impacts:

- Direct employment impact;
- Induced employment impact;
- Indirect employment impact.

The direct employment impacts are the jobs directly generated by airport activity, which would vanish if airport activity at Van Nuys Airport were to cease. These jobs include jobs with charter airlines, Federal and City government workers, fixed-base operators, Airport Administration (LAWA), corporate hangars, rental car agencies, construction firms, taxi cabs moving passengers to and from the airport, maintenance operations, and flight schools, etc. These impacts are developed through detailed interviews with each airport tenant located at Van Nuys Airport.

The induced employment impacts are the jobs created throughout the local economy because *individuals* directly employed due to activity at Van Nuys Airport spend their wages locally on goods and services such as food, housing and health care. Also included in this category are non-consumption driven jobs supporting the direct jobs such as jobs with state and local government agencies (excluding those state and local government jobs included as direct impacts), financial/business and educational services, retail, housing/construction, transportation services (including service stations, auto parts suppliers, automobile dealers, body shops, etc.), entertainment/recreational services, apparel and healthcare services.

A portion of the income received by those directly employed is saved; another portion is used to pay Federal, state and local taxes, while another portion is used to purchase goods and services from firms located in the Los Angeles area, as well as out-of-region firms. The purchase of goods and services from Los Angeles area firms creates induced jobs for area residents in the firms supplying the goods and services. Furthermore, those individuals supplying the goods and services also receive income from their employers and use a portion of it for additional purchases from firms located in the area. This “trickle-down” effect of an initial income expenditure results in a multiplier effect throughout the Los Angeles regional economy known as the personal income multiplier.

The indirect employment impacts are the jobs generated due to the purchase of goods and services by *firms* dependent upon airport activity. This includes local purchases by the airport tenants, the airport administration, and the hotels, restaurants, and retail outlets in the area visitors industry.





For example, the corporate flight departments purchase such items as fuel, parts and office supplies from local firms, thereby creating jobs in these supplying industries. Similarly, the airport itself purchases such services as contract construction, utilities, and maintenance services from local suppliers, also creating jobs in the local economy. For the most part, the jobs resulting from such purchases are included in the direct job impacts. For example, the jobs with suppliers of aircraft services (including fixed-base operators, fuel handlers and parts suppliers) and jobs with the contract construction and consulting firms are included as direct job impacts. In some studies, impacts in these supplying industries are included as indirect jobs and measured through the use of a regional input/output model. For the purposes of this study, a more detailed assessment of jobs in the supplying industries was more appropriate since many are located on the airport facility and these impacts are considered as direct job impacts.

Personal Income and Local Consumption Impact

The ***personal income and local consumption impact*** is the measure of personal wages and salaries received by individuals directly employed due to airport activity. This direct personal income is re-spent throughout the Los Angeles region by those that are directly employed. This re-spending effect, in turn, generates additional jobs -- the induced employment impact. This re-spending throughout the region is estimated using a regional personal income multiplier specific to Los Angeles, as developed for Martin Associates by the U.S. Bureau of Economic Analysis, Regional Input-Output Modeling System (RIMS). The re-spending effect varies by region: a larger re-spending effect occurs in regions that produce a relatively large proportion of the goods and services consumed by residents, while lower re-spending effects are associated with regions that import a relatively large share of consumer goods and services (since personal income "leaks out" of the region for these out-of-state purchases). Similarly, indirect employment impacts are generated from local purchases by the firms directly dependent upon airport activity. These employment impacts are based on the local purchase patterns reported by these firms through the interview process. These local purchases include purchases of office supplies, communications, goods and parts, for maintenance and repair services, insurance, etc. Local and in-state purchases by the firms providing direct services at Van Nuys Airport are combined with jobs-to-sales coefficients for each type of local purchase to estimate the number of indirect jobs that are due to the off-airport purchases made by the firms directly dependent upon activity at Van Nuys Airport. The coefficients are derived from the Bureau of Economic Analysis, Regional Input-Output Modeling System (RIMS II) and are specific to the Los Angeles area.

Tax Impact

State and local ***tax impacts*** are tax payments made to the state and local governments by both firms and individuals involved in providing services in support of airport





activity at Van Nuys Airport. State and local tax impacts include tax revenue from all types of state and local taxes, and are measured for both the state and local jurisdictions in California, based on the residency of those directly employed by activities at Van Nuys Airport.

The four types of impacts outlined above are estimated for calendar year 2006 passenger and general aviation activity at Van Nuys Airport, visitor industry impacts as well as non-aviation real estate activity.

IMPACTS CREATED BY VAN NUYS AIRPORT ACTIVITY IN 2006

A summary of the airport-generated impacts (those generated by general aviation and passenger activity at the airport), visitor industry impacts (those generated by non-resident passenger activity at Van Nuys Airport), non-aviation real estate impacts (those generated by tenants and subtenants of Van Nuys Airport that are not aviation-related firms) and their combined total impacts are presented in **Table E-1**.

Table E-1
Economic Impacts of Van Nuys Airport

IMPACTS	AIRPORT GENERATED	VISITOR INDUSTRY	NON-AVIATION REAL ESTATE	TOTAL IMPACT
JOBS				
DIRECT	2,068	2,031	1,542	5,641
INDUCED	2,172	666	871	3,709
INDIRECT	<u>1,639</u>	<u>445</u>	<u>884</u>	<u>2,968</u>
TOTAL	5,879	3,142	3,297	12,317
PERSONAL INCOME/LOCAL CONSUMPTION (\$1,000)				
DIRECT	\$130,605.6	\$42,285.4	\$57,685.6	\$230,576.6
RE-SPENDING/CONSUMPTION	\$233,653.5	\$39,748.2	\$59,704.6	\$333,106.3
INDIRECT	<u>\$75,807.5</u>	<u>\$10,746.5</u>	<u>\$57,070.4</u>	<u>\$143,624.4</u>
TOTAL (\$1,000)	\$440,066.6	\$92,780.1	\$174,460.5	\$707,307.3
DIRECT BUSINESS REVENUE (\$1,000)	\$503,582.5	\$160,985.8	\$351,573.0	\$1,016,141.4
LOCAL PURCHASES (\$1,000)	<u>\$134,015.5</u>	<u>\$14,802.4</u>	<u>\$148,664.2</u>	<u>\$297,482.0</u>
TOTAL REVENUE (\$1,000)	\$637,598.0	\$175,788.2	\$500,237.2	\$1,313,623.4
STATE AND LOCAL TAXES (\$1,000)	\$49,727.5	\$10,484.2	\$19,714.0	\$79,925.7

Totals may not add due to rounding

Overall, the general aviation and passenger activity, as well as the non-aviation real estate activity at Van Nuys Airport generated 12,317 direct, induced and indirect jobs in the Los Angeles metropolitan area and \$1.3 billion of business revenue in 2006. A total of \$707.3 million of direct personal income, induced income and consumption impacts, and indirect income was also generated by activity at Van Nuys Airport. The airport and non-aviation real estate activity provided nearly \$80 million of state and local taxes. The jobs and business revenue at Van Nuys Airport include the impacts





generated by the air service provided for employees of, and visitors to, companies located in the Los Angeles area.

Passenger and general aviation activity at the Van Nuys Airport created the following impacts:

- 5,879 direct, induced and indirect jobs were generated for residents of the Los Angeles area. Of the 5,879 jobs, 2,068 were direct jobs, while 2,172 were induced throughout the region to support the purchase of goods and services by the 2,068 directly dependent employees. An additional 1,639 indirect jobs were generated in the local economy due to the \$134.0 million of local purchases by firms directly dependent on Van Nuys Airport.
- \$440.1 million of direct, induced and indirect personal income and consumption expenditures were generated in the Los Angeles area as a result of the airport activity at Van Nuys Airport in 2006.
- Approximately \$637.6 million of business sales were generated by airport activity at Van Nuys Airport.
- State and local governments received \$49.7 million in tax revenues from airport activity at Van Nuys Airport in 2006.

In addition to these airport-generated impacts, it is estimated that 3,142 direct, induced and indirect jobs were supported in the Los Angeles area visitor industry due to expenditures by the 320,152 visitors to the region who arrived via Van Nuys Airport. The impacts of the visitors were estimated from the results of a passenger survey conducted of passengers using Van Nuys Airport. In addition, detailed interviews were conducted with each of the fixed-base operators, flight schools, key corporate users and charter operators at Van Nuys Airport to develop visitor profiles of expenditure activity while in the Los Angeles region, including length of stay and purpose of the trip. These visitors spent \$175.8 million on area hotels, restaurants, retail stores and entertainment establishments, which in turn generated the jobs in the Los Angeles area visitor industry. As the result of visitors arriving via Van Nuys Airport, \$10.5 million of state and local tax revenues were generated.

The non-aviation real estate activity includes the tenants and subtenants of Van Nuys Airport who do not provide aviation-related products or services but are located on Airport property. Firms included in these impacts include a home building products store, a golf course, a sod farm, several general offices, manufacturing/construction firms, and retail/wholesale establishments. This activity created 3,297 direct, induced and indirect jobs in the Los Angeles region. A total of \$174.5 million of direct, induced and indirect wages and salaries were generated in the Los Angeles region as a





result of the non-aviation real estate activity in 2006. The non-aviation tenants at Van Nuys Airport generated approximately \$500.2 million of business revenue and state and local governments received \$19.7 million in tax revenues from the non-aviation real estate activity at the airport in 2006.

In addition to measuring the economic impacts of the aviation and non-aviation impacts, Martin Associates also evaluated the potential economic impacts of the Non-Addition Rule (NAR). A review of airport statistics, as well as interviews with the fixed-base operators, indicated that the Stage 2 aircraft that are impacted by the NAR represent less than 2% of total operations at Van Nuys Airport, and furthermore, those “grandfathered” aircraft represent less than 1% of total operations at Van Nuys. While interviews with the fixed-base operators indicated that some impacts were realized after the enforcement of the NAR, these impacts will likely be reduced over time as the Stage 2 aircraft are replaced with new aircraft.

A comparison of the results of this current economic impact study with the 1998 Economic Analysis of Van Nuys Airport indicates that the total direct, induced and indirect jobs grew from 10,027 jobs in 1998 to 12,317 jobs in 2006.



I. INTRODUCTION, OVERVIEW AND METHODOLOGY

The Los Angeles World Airports (LAWA) retained the services of Martin Associates to measure the economic impact of activity generated by Van Nuys Airport (VNY) in calendar year 2006. Economic impacts at VNY are generated by airport or aviation related activity, visitors to the Los Angeles area who used VNY, and non-aviation real estate tenants located at the airport. In this study, the economic impacts created by the airport are measured in terms of jobs, personal income, state and local taxes, and business revenue. These are not additive measures but rather different ways of expressing the economic impacts of the airport.

The methodology utilized in this analysis has been used to assess the economic impacts created by airport activity at Hartsfield-Atlanta International Airport, San Francisco International Airport, Portland International Airport, Seattle-Tacoma International Airport, Miami International Airport, Milwaukee's General Mitchell International Airport, Minneapolis/St. Paul International Airport, Washington DC's Reagan National and Dulles International Airports, Oakland International Airport, Baltimore-Washington International Airport, San Jose International Airport and Sacramento International Airport. This same methodology has also been used by Martin Associates to quantify the economic impacts of numerous general aviation airports throughout the United States including the 34 general aviation and commercial airports in the State of Maryland, the four general aviation/limited commercial service airports in the Miami-Dade County Aviation System, Capital City Airport and Carlisle Airport near Harrisburg, PA, Hillsboro and Troutdale Airports in Portland (OR), Milwaukee's Lawrence J. Timmerman Airport, Lancaster (PA) Airport, and Reid-Hillview Airport in San Jose, California.

In order to measure the impacts in the most defensible manner possible, the methodology used is based on detailed interviews, local economic data and airport statistics. The impacts are estimated for the general aviation and passenger activity, as well as for the non-aviation real estate activity at Van Nuys Airport for the calendar year 2006. Furthermore, the impacts are estimated for the Los Angeles metropolitan area (consisting of the City of Los Angeles, including a breakdown into each of the Community Plan Areas, and the counties of Los Angeles, Ventura, Santa Barbara, Orange, Kern, San Bernardino and Riverside).

The remainder of this chapter summarizes the methodology and highlights key assumptions. The chapter consists of the following sections:

- Section 1 provides an overview of the impact structure and describes how the airport activity creates and supports jobs, personal income, business revenue, and taxes in the local, regional and state economies;





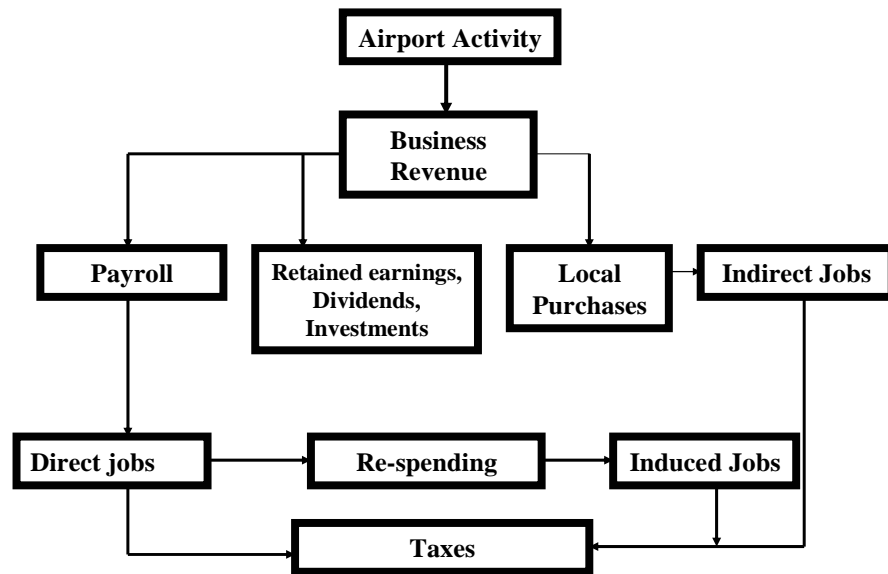
- The detailed categories and sectors of the economy in which the impacts occur are defined and described in Section 2 of this chapter;
- Section 3 gives an overview of the data collection methodology.

1. IMPACT STRUCTURE

Activity at an airport contributes to the local and state economy by generating business revenue for local and national firms providing air passenger service, general aviation services, and support services. These firms, in turn, provide employment and income to individuals and pay taxes to state and local governments. **Exhibit I-1**, on the following page, shows how aviation activity at Van Nuys Airport generates impacts throughout the local, state and national economy. As this exhibit indicates, the impact of an airport on a local or state economy cannot be reduced to a single number, but instead, airport activity creates several categories of impacts. These are the *employment impact*, *income and consumption impact*, *business revenue impact*, and *tax impact*. These impacts are not additive. For example, the income impact is a part of the revenue impact, and adding these impacts together would result in double counting.



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Flow of Economic Impacts Generated by
Airport Activity



REVENUE IMPACT

At the outset, activity at the airport generates *business revenue* for firms which provide air passenger service, charter operations, maintenance, aircraft parts and supplies and ground support services. This business revenue impact is dispersed throughout the economy in several ways. It is used to hire people to provide the services, to purchase goods and services, to pay for the use of the airport and to make Federal, state and local tax payments.

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EMPLOYMENT IMPACT

The ***employment impact*** consists of three levels of job impacts:

- Direct employment impact;
- Induced employment impact;
- Indirect employment impact.

The direct employment impacts are the jobs directly generated by airport activity, which would vanish if airport activity at Van Nuys Airport were to cease. These jobs include jobs with charter airlines, Federal and City government workers, fixed-base operators, Airport Administration (LAWA), corporate hangars, rental car agencies, construction firms, taxi cabs moving passengers to and from the airport, maintenance operations, and flight schools, etc. These impacts are determined through detailed interviews with each airport tenant located at Van Nuys Airport.

The induced employment impacts are the jobs created throughout the local economy because *individuals* directly employed due to activity at Van Nuys Airport spend their wages locally on goods and services such as food, housing and health care. Also included in this category are non-consumption driven jobs supporting the direct jobs such as jobs with state and local government agencies (excluding those state and local government jobs included as direct impacts), financial/business and educational services, retail, housing/construction, transportation services (including service stations, auto parts suppliers, automobile dealers, body shops, etc.), entertainment/recreational services, apparel and healthcare services.

A portion of the income received by those directly employed is saved; another portion is used to pay Federal, state and local taxes, while another portion is used to purchase goods and services from firms located in the Los Angeles area, as well as out-of-region firms. The purchase of goods and services from Los Angeles area firms creates induced jobs for area residents in the firms supplying the goods and services. Furthermore, those individuals supplying the goods and services also receive income from their employers and use a portion of it for additional purchases from firms located in the area. This “trickle-down” effect of an initial income expenditure results in a multiplier effect throughout the Los Angeles regional economy known as the personal income multiplier.

The indirect employment impacts are the jobs generated due to the purchase of goods and services by *firms* dependent upon airport activity. This includes local purchases by the airport tenants, the airport administration, and the hotels, restaurants, and retail outlets in the area visitors industry.





For example, the corporate flight departments purchase such items as fuel, parts and office supplies from local firms, thereby creating jobs in these supplying industries. Similarly, the airport itself purchases such services as contract construction, utilities, and maintenance services from local suppliers, also creating jobs in the local economy. For the most part, the jobs resulting from such purchases are included in the direct job impacts. For example, the jobs with suppliers of aircraft services (including fixed-base operators, fuel handlers and parts suppliers) and jobs with the contract construction and consulting firms are included as direct job impacts. In some studies, impacts in these supplying industries are included as indirect jobs and measured through the use of a regional input/output model. For the purposes of this study, a more detailed assessment of jobs in the supplying industries was more appropriate since many are located on the airport facility and these impacts are considered as direct job impacts.

PERSONAL INCOME AND LOCAL CONSUMPTION IMPACT

The ***personal income and local consumption impact*** is the measure of personal wages and salaries received by individuals directly employed due to airport activity. This direct personal income is re-spent throughout the Los Angeles region by those that are directly employed. This re-spending effect, in turn, generates additional jobs -- the induced employment impact. This re-spending throughout the region is estimated using a regional personal income multiplier specific to Los Angeles, as developed for Martin Associates by the U.S. Bureau of Economic Analysis, Regional Input-Output Modeling System (RIMS). The re-spending effect varies by region: a larger re-spending effect occurs in regions that produce a relatively large proportion of the goods and services consumed by residents, while lower re-spending effects are associated with regions that import a relatively large share of consumer goods and services (since personal income "leaks out" of the region for these out-of-state purchases).

Similarly, indirect employment impacts are generated from local purchases by the firms directly dependent upon airport activity. These employment impacts are based on the local purchase patterns reported by these firms through the interview process. These local purchases include purchases of office supplies, communications, goods and parts, for maintenance and repair services, insurance, etc. Local and in-state purchases by the firms providing direct services at Van Nuys Airport are combined with jobs-to-sales coefficients for each type of local purchase to estimate the number of indirect jobs that are due to the off-airport purchases made by the firms directly dependent upon activity at Van Nuys Airport. The coefficients are derived from the Bureau of Economic Analysis, Regional Input-Output Modeling System (RIMS II) and are specific to the Los Angeles area



TAX IMPACT

State and local ***tax impacts*** are tax payments made to the state and local governments by both firms and individuals involved in providing services in support of airport activity at Van Nuys Airport. State and local tax impacts include tax revenue from all types of state and local taxes, and are measured for both the state and local jurisdictions in California, based on the residency of those directly employed by activities at Van Nuys Airport.

The four types of impacts outlined above are estimated for calendar year 2006 passenger and general aviation activity at Van Nuys Airport, as well as non-aviation real estate activity.

2. ECONOMIC IMPACT SECTORS

An airport is a diverse economic system. The businesses that have employees at Van Nuys Airport cover a wide spectrum of trade and service sectors. For the purposes of this study, the airport economic system is divided into five sectors:

- *Airport services;*
- *Passenger ground transportation;*
- *Contract construction/ consulting services;*
- *Visitor industry services;*
- *Non-aviation real estate tenants.*

Each of these sectors covers a variety of activities. A discussion of these five categories is provided below, with a description of the major participants in each.

AIRPORT SERVICE SECTOR

The airport service sector consists of charter operators providing passenger services, corporate aviation, general aviation, airport administration and firms providing support services to the charter operators, passengers, and to the airport. This group consists of the following participants:

- *Charter operators;*
- *Corporate hangars and business aircraft;*
- *Not-for-profit aviation services;*
- *Flight and ground schools;*
- *Fixed-base operators;*
- *Maintenance and aviation parts suppliers;*
- *Airport Administration (Los Angeles World Airports);*





- *Aircraft interior services;*
- *Medical response operations;*
- *Federal Government Agencies (i.e., FAA);*
- *Miscellaneous (associations and not-for-profit organizations at the airport).*

Jobs in this category are typically located on airport property.

PASSENGER GROUND TRANSPORTATION SECTOR

Passenger ground transportation consists of car rental firms and other ground transportation modes, such as buses, taxis and limousines. This group covers all commercial transportation of individuals to and from the airport and includes both drivers and supporting reservation and maintenance employees.

CONTRACT CONSTRUCTION AND CONSULTING SECTOR

Individuals employed in this group include those providing construction and remodeling work at the airport, as well as architects and engineers providing planning and design services. This sector measures the annual impact of capital projects.

VISITOR INDUSTRY SERVICES SECTOR

Individuals visit the Los Angeles area for a variety of reasons, including business, pleasure, participation in conventions and to attend many of the entertainment centers in Los Angeles and surrounding communities. The close proximity of Van Nuys Airport to downtown Los Angeles and surrounding business and entertainment communities provides a variety of benefits to the business and pleasure travelers using the Airport. These visitors purchase hotel rooms, pay for meals and entertainment, and make retail purchases while in the Los Angeles area. These purchases of goods and services stimulate the local economy, in turn generating jobs with hotels, restaurants, retail outlets and local entertainment establishments. Those individuals employed in the Los Angeles visitor industry due to visitors' purchases receive income. This income is re-spent in the local economy generating induced jobs in the regional economy.

The magnitude of the economic impact generated by visitors using Van Nuys Airport varies directly with the volume of out-of-town visitors and the length of time the visitors stay in the Los Angeles area. Also, the impacts depend upon the amount of money spent by visitors on a daily basis, as well as the type of purchases made. The volume of air visitors to the area depends upon the number of out-of-town airport users versus the number of local resident users of the airport. The length of time visitors spend in the Los Angeles area, as well as how they spend their money further depends upon the purpose of the trip to the Los Angeles area.





NON-AVIATION REAL ESTATE SECTOR

The non-aviation real estate sector consists of businesses located on Van Nuys Airport property that do not provide aviation-related services. These businesses include offices, restaurants, retail/wholesale companies, property management firms, and manufacturing firms, etc. Jobs in this category are generated by the demand for the goods and services produced by the firms rather than by general aviation activity at Van Nuys Airport.

3. DATA COLLECTION METHODOLOGY

Impacts were estimated on the basis of detailed interviews with firms in the five economic impact categories described above. A total of 244 firms were interviewed as part of this study, which represents 100% coverage of the business community serving the Van Nuys Airport, resulting in direct impacts which are highly defensible.

Published data was used to complement the interview results, particularly in estimating induced, indirect and related job impacts. The major sources of published data are publications by the U.S. Bureau of Census: the Census of Service Industries, Census of Wholesale Industries, Census of Construction, the Census of Retail Industries, County Business Patterns, and the Survey of Manufactures for the Los Angeles Metropolitan Statistical Area (MSA).

Table I-1, on the following page, shows the number of interviews by type of firm.

Table I-1
Summary of Interview Responses

IMPACT CATEGORY	NUMBER OF INTERVIEWS
AVIATION SERVICE PROVIDERS	
Aviation Services	36
Avionics/Sales	16
Flight School/Ground School	11
Maintenance/Repair	<u>15</u>
Subtotal	78
GOVERNMENT	
RENTAL CARS	3
FIXED-BASE OPERATORS	
CORPORATE FLIGHT/CHARTER	
NON-AVIATION REAL ESTATE TENANTS	
Hotel	1
Manufacturing/Construction	3
Miscellaneous	2
Office	54
Property Management	6
Restaurant	2
Sales	24
Services	<u>3</u>
Subtotal	95
TOTAL INTERVIEWS	
	244



II. ECONOMIC IMPACTS OF THE GENERAL AVIATION ACTIVITY AT VAN NUYS AIRPORT

In 2006, there were 394,915 operations (take-offs and landings) at Van Nuys Airport.¹ In addition, about 320,152 visiting (non-resident) passengers used the airport. These passengers arrived via the airport on both private aircraft as well as corporate and chartered flights. The airport is home to flight schools; government agencies, including the Federal Aviation Administration's Flight Standards District Office (FSDO); fixed-base operators (FBO's) such as Clay Lacy Aviation, Maguire Aviation and Million Air; charter operations such as Spirit Aviation and Sunquest Aviation; avionics shops; aircraft interior firms and maintenance operations.

Table II-1 summarizes the economic impacts of Van Nuys Airport. On-site generated impacts, impacts generated by the visitors to the Los Angeles metropolitan region using Van Nuys Airport, impacts generated by the non-aviation real estate tenants located at the Van Nuys Airport and total impacts are shown for each category of impacts measured.

Table II-1
Economic Impacts Generated by the Van Nuys Airport

IMPACTS	AIRPORT GENERATED	VISITOR INDUSTRY	NON-AVIATION REAL ESTATE	TOTAL IMPACT
JOBS				
DIRECT	2,068	2,031	1,542	5,641
INDUCED	2,172	666	871	3,709
INDIRECT	<u>1,639</u>	<u>445</u>	<u>884</u>	<u>2,968</u>
TOTAL	5,879	3,142	3,297	12,317
PERSONAL INCOME/LOCAL CONSUMPTION (\$1,000)				
DIRECT	\$130,605.6	\$42,285.4	\$57,685.6	\$230,576.6
RE-SPENDING/CONSUMPTION	\$233,653.5	\$39,748.2	\$59,704.6	\$333,106.3
INDIRECT	<u>\$75,807.5</u>	<u>\$10,746.5</u>	<u>\$57,070.4</u>	<u>\$143,624.4</u>
TOTAL (\$1,000)	\$440,066.6	\$92,780.1	\$174,460.5	\$707,307.3
DIRECT BUSINESS REVENUE (\$1,000)	\$503,582.5	\$160,985.8	\$351,573.0	\$1,016,141.4
LOCAL PURCHASES (\$1,000)	<u>\$134,015.5</u>	<u>\$14,802.4</u>	<u>\$148,664.2</u>	<u>\$297,482.0</u>
TOTAL REVENUE (\$1,000)	\$637,598.0	\$175,788.2	\$500,237.2	\$1,313,623.4
STATE AND LOCAL TAXES (\$1,000)	\$49,727.5	\$10,484.2	\$19,714.0	\$79,925.7

Totals may not add due to rounding

¹ FAA Tower Counts for Van Nuys Airport





1. EMPLOYMENT IMPACTS

As the result of passenger and general aviation activity, as well as non-aviation real estate activity at Van Nuys Airport in 2006, 12,317 direct, induced and indirect jobs in the Los Angeles metropolitan area were generated.²

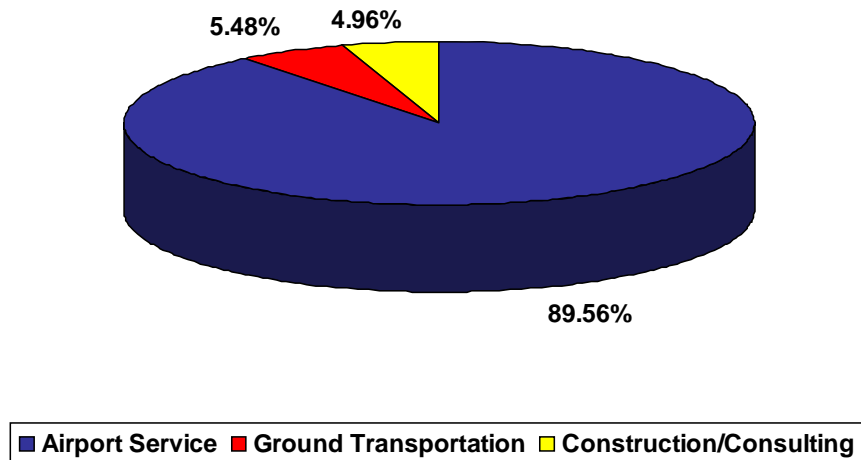
Airport Generated Employment Impacts

In 2006, there were 394,915 operations (take-offs and landings) at Van Nuys Airport. This activity generated 2,068 **direct jobs**. These jobs would be discontinued immediately if airport activity ceased. Because of the local purchases by the 2,068 directly employed, an additional 2,172 **induced jobs** were supported in the local economy.

As the result of \$134 million of local purchases by the firms dependent upon Van Nuys Airport, an additional 1,639 **indirect jobs** were supported in local office supply firms, retail and wholesale outlets, telecommunications firms, professional services and machine and parts firms.

Exhibit II-1 shows the distribution of the airport generated direct jobs by sector. As this exhibit indicates, nearly 90% of the 2,068 jobs directly generated by airport activity are concentrated in the airport service sector. The number of jobs in the other two categories is small in comparison.

Exhibit II-1
Airport Generated Direct Jobs by Sector



² Jobs are measured in terms of full-time worker equivalents. If a worker is employed only 50 percent of the time by activity at Van Nuys Airport, then this worker is counted as .5 jobs.



The airport service sector generated 1,852 direct jobs, representing nearly 90% of the airport generated direct jobs at Van Nuys Airport in 2006. The aviation service provider category generated the majority of jobs within the airport service sector, generating 696 direct jobs (37.58%). The corporate flight/charter operators generated approximately 26% of the direct jobs in the airport service sector, followed by the fixed-base operators (20.4%). **Exhibit II-2** shows the distribution of the direct jobs generated by the airport service sector. **Table II-2**, on the following page, shows the distribution of direct jobs by category.

Exhibit II-2
Distribution of Airport Service Sector Direct Jobs

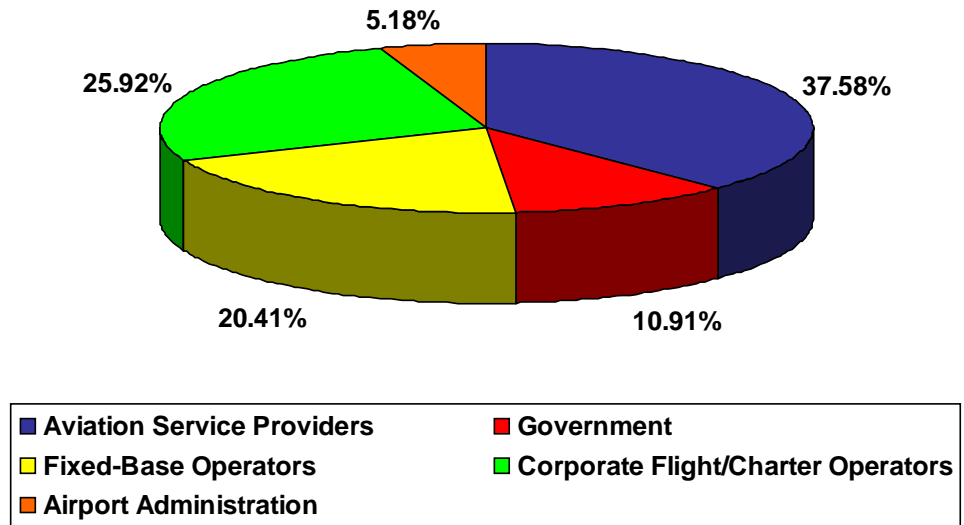


Table II-2
 Airport Generated Direct Jobs by Category

IMPACT CATEGORY	DIRECT JOBS
AIRPORT SERVICE SECTOR:	
Aviation Service Providers	696
Aviation Services	209
Avionics/Sales	230
Flight School/Ground School	58
Maintenance/Repair	199
Government	202
Fixed-Base Operators	378
Corporate Flight/Charter Operators	480
Airport Administration	96
TOTAL AIRPORT SERVICE SECTOR	1,852
GROUND TRANSPORTATION SECTOR:	
Rental Cars	6
Taxis	37
Limos/Buses/Vans	70
TOTAL GROUND TRANSPORTATION SECTOR	113
CONSTRUCTION/CONSULTING SECTOR	103
TOTAL AIRPORT GENERATED DIRECT JOBS	2,068





In order to estimate the local economic impact created by airport activity, data on residency of employees was collected during the interviews with the airport tenants, as well as with the administration of Los Angeles World Airports. The airport generated direct job impact, 2,068 jobs, was then allocated based on county of residence. **Table II-3** shows the distribution of job impacts by county.

Table II-3
Distribution of Airport Generated Direct Jobs by Place of Residence

COUNTIES OF RESIDENCE	SHARE OF AVIATION DIRECT	DIRECT AVIATION JOBS
Los Angeles	79.76%	1,650
Ventura	10.77%	223
Santa Barbara	0.20%	4
Orange	2.14%	44
Kern	0.87%	18
San Bernardino	0.81%	17
Riverside	0.56%	12
Other CA	2.68%	55
Other US	2.20%	45
TOTAL	100.00%	2,068

As this table indicates, the majority of these jobs were held by residents of Los Angeles County (including the City of Los Angeles), followed by residents of Ventura County.

Of the 1,650 direct jobs residing in Los Angeles County, approximately 56% (919) live in the City of Los Angeles. **Table II-4**, on the following page, identifies the distribution of these direct jobs by each Los Angeles Community Plan Area. As shown in the table, the majority of these direct jobs reside in Van Nuys/North Sherman Oaks area (16.91%), followed by Canoga Park/West Hills/Winnetka/Woodland Hills area (11.40%) and Northridge area (8.28%).



Table II-4
Distribution of Airport Generated Direct Jobs by Community Plan Area

COMMUNITY PLAN AREAS	SHARE	DIRECT JOBS
Arleta-Pacoima	3.9%	35
Bel Air-Beverly Crest	0.4%	4
Brentwood-Pacific Palisades	0.9%	9
Canoga Park-West Hills-Winnetka-Woodland Hills	11.4%	105
Chatsworth-Porter Ranch	5.3%	49
Encino-Tarzana	4.1%	38
Granada Hills-Knollwood	4.7%	43
Hollywood	0.8%	7
Mission Hills-Panorama City-North Hills	7.4%	68
Northeast Los Angeles	2.9%	27
North Hollywood-Valley Village	4.8%	44
Northridge	8.3%	76
Reseda-West Van Nuys	6.7%	61
San Pedro	0.3%	2
Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass	5.1%	46
Silver Lake-Echo Park-Elysian Valley	0.5%	5
South Los Angeles	1.8%	16
Southeast Los Angeles	0.3%	2
Sun Valley-La Tuna Canyon	0.7%	6
Sunland-Tujunga-Shadow Hills-Lake View Terrace-East La Tuna Canyon	2.9%	26
Sylmar	4.9%	45
Van Nuys-North Sherman Oaks	16.9%	155
Venice	0.7%	7
Westchester-Playa Del Rey	0.7%	6
West Los Angeles	2.0%	18
Wilshire	1.1%	10
Other Los Angeles Community Plan Areas	0.7%	6
TOTAL	100.0%	919

Totals may not add due to rounding

Visitor Industry Employment Impacts

In 2006, it is estimated that 320,152 visiting (non-resident) passengers passed through Van Nuys Airport. Although the exact number of passengers, as well as visitors, who arrive in the Los Angeles area via Van Nuys Airport, is not collected, Martin Associates estimated these figures based upon information provided by Airport Administration (LAWA) and data collected through detailed interviews of the fixed-base operators, key corporate users and charter operators.

To develop this estimate, Martin Associates first identified the number of operations (take-offs and landings) at Van Nuys Airport in 2006 and the share of these operations that represented based versus transient aircraft activity. This information was provided





by LAWA from FAA Tower Counts. Data recorded in operations logs kept by LAWA to monitor the implementation of the Non-Addition Rule was used to determine the average number of passengers carried per operation by aircraft type and the number of operations by aircraft type for the transient Stage 2 operations included in the operations logs. The remaining transient operations not included in the operations logs, i.e. Non-Stage 2 activity, were calculated to determine the average number of passengers by aircraft type by the number of seats of each type of aircraft and resulting passenger capacity. In a similar manner, the number of based aircraft, by type of aircraft, was identified through aircraft inventories provided by LAWA and an average number of passengers per operation for each based aircraft type were determined. To estimate the total number of enplaning passengers, the share of operations for based versus transient and the corresponding average number of passengers per aircraft type per operation were multiplied.

It was estimated that approximately 540,343 passengers boarded private, corporate or charter aircraft at Van Nuys Airport in 2006. Based on the passenger survey, approximately 60% of these enplaning passengers were not residents of the Los Angeles area. Therefore, of the 540,343 enplaning passengers at Van Nuys Airport, about 320,152 passengers were visitors to the Los Angeles area. It is the travel and spending characteristics of these 320,152 visitors that will contribute to the local and state economy through lodging, retail purchases, eating in restaurants, and local transportation services.

Martin Associates conducted a passenger survey to develop profiles of expenditure activity of these visitors while in the Los Angeles region, including length of stay and purpose of trip. The passenger survey was distributed to pilots, tenants and fixed-base operators to complete regarding the passenger profiles of those using their facilities and services. To complement the passenger survey responses, interviews were conducted with each of the fixed-base operators, flight schools, key corporate users, and charter operators at Van Nuys Airport.

Activities by these visitors resulted in \$175.8 million in spending in the local visitor industry for food, lodging, entertainment services, retail purchases and transportation services. These \$175.8 million of visitor industry purchases by the non-resident passengers supported 2,031 direct jobs in the local area visitors industry.³

³ It is to be noted that these visitor industry impacts are estimated separately from airport on-site generated impacts since it is likely that a portion of these visitors would continue to visit the Los Angeles area even if Van Nuys were not available for air service. However, at this given point in time these visitor industry direct, induced and indirect impacts are supported by the passenger activity at Van Nuys Airport.





As the result of local purchases by these 2,031 employees of the local visitor industry, an additional 666 induced jobs were supported in the local economy.

About \$14.8 million of local purchases were made by the visitor industry firms in support of the passengers using Van Nuys Airport. The \$14.8 million of local purchases supported 445 indirect jobs.

Non-Aviation Real Estate Employment Impacts

In 2006, approximately 71 non-aviation real estate tenants were located at Van Nuys Airport. This non-aviation tenant activity generated 1,542 **direct jobs**. These jobs are concentrated primarily with office, manufacturing/construction firms and retail/wholesale activity. Because of the local purchases by the 1,542 directly employed, an additional 871 **induced jobs** were supported in the local economy.

As the result of \$148.7 million of local purchases by the firms dependent upon Van Nuys Airport, an additional 884 **indirect jobs** were supported in local office supply firms, retail and wholesale outlets, telecommunications firms, maintenance and repair companies, and professional service firms.

Table II-5 shows the distribution of employment within the non-aviation real estate activity. As this table indicates, the manufacturing/construction industry generated the largest number of jobs, followed by the sales industry and general office firms.

Table II-5
Distribution of Non-Aviation Employment Impacts

IMPACT CATEGORY	DIRECT JOBS
NON-AVIATION REAL ESTATE SECTOR:	
Manufacturing/Construction	450
Miscellaneous	32
Office	332
Property Management	13
Restaurant/Hotel	272
Sales	340
Services	<u>103</u>
TOTAL NON-AVIATION REAL ESTATE DIRECT JOBS	1,542





The direct job impact generated by the non-aviation real estate activity, 1,542 jobs, was allocated based on county of residence. **Table II-6** shows the distribution of job impacts by county.

Table II-6
Distribution of Non-Aviation Real Estate Direct Jobs by Place of Residence

COUNTIES OF RESIDENCE	SHARE OF DIRECT REAL ESTATE	DIRECT REAL ESTATE JOBS
Los Angeles	95.25%	1,468
Ventura	2.30%	35
Santa Barbara	0.30%	5
Orange	0.58%	9
Kern	0.30%	5
San Bernardino	0.52%	8
Riverside	0.30%	5
Other CA	0.15%	2
Other US	0.30%	5
TOTAL	100.00%	1,542

As shown in Table II-6, the majority of these jobs were held by residents of Los Angeles County (including the City of Los Angeles), followed by residents of Ventura County.

Of the 1,468 direct jobs residing in Los Angeles County, nearly 60% (870) live in the City of Los Angeles. **Table II-7**, on the following page, identifies the distribution of these direct jobs by each Los Angeles Community Plan Area. As shown in the table, the majority of these direct jobs reside in Van Nuys/North Sherman Oaks area (22.91%), followed by Northridge area (16.31%) and Mission Hills/Panorama City/North Hills area (14.02%).



Table II-7
Distribution of Non-Aviation Direct Jobs by Community Plan Area

COMMUNITY PLAN AREAS	SHARE	DIRECT JOBS
Arleta-Pacoima	2.8%	25
Brentwood-Pacific Palisades	0.3%	2
Canoga Park-West Hills-Winnetka-Woodland Hills	7.4%	64
Central City	0.9%	8
Chatsworth-Porter Ranch	3.0%	26
Encino-Tarzana	3.9%	34
Granada Hills-Knollwood	1.5%	13
Harbor Gateway	0.3%	2
Hollywood	0.5%	5
Mission Hills-Panorama City-North Hills	14.0%	122
Northeast Los Angeles	2.4%	21
North Hollywood-Valley Village	3.1%	27
Northridge	16.3%	142
Reseda-West Van Nuys	8.5%	74
Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass	3.2%	28
South Los Angeles	1.2%	11
Southeast Los Angeles	0.8%	7
Sun Valley-La Tuna Canyon	0.8%	7
Sunland-Tujunga-Shadow Hills-Lake View Terrace-East La Tuna Canyon	1.8%	15
Sylmar	2.0%	18
Van Nuys-North Sherman Oaks	22.9%	199
Venice	0.3%	2
Westlake	0.4%	4
West Los Angeles	0.7%	6
Other Los Angeles Community Plan Areas	0.9%	8
TOTAL	100.0%	870

Totals may not add due to rounding

2. BUSINESS REVENUE IMPACT

Passenger and general aviation activity, as well as non-aviation real estate activity generated \$1.3 billion of business revenue to firms providing services at Van Nuys Airport, to local visitor industry firms and to non-aviation tenants.

Airport Generated Business Revenue

Revenue generated by airport activity is dispersed throughout the economy in several ways. For example, gross revenue is used to pay employee salaries and the whole range of taxes, it is distributed to stockholders, and it is used for purchases of goods and services. Only part of this revenue can be traced geographically with any degree of accuracy, the portion of the revenue paid out in salaries and state and local taxes.

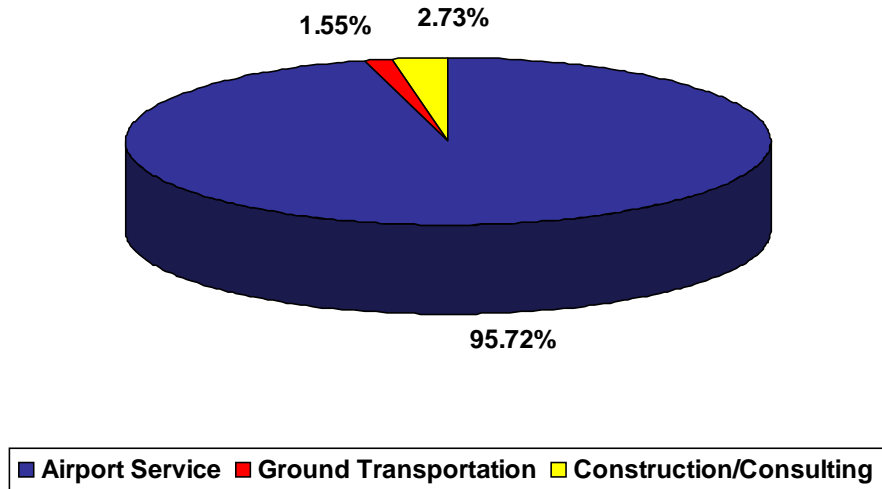




In 2006, the passenger and general aviation activity created \$637.6 million of business revenue to firms supplying passenger and aviation services at Van Nuys Airport.

Exhibit II-3 indicates the distribution, by economic impact sector, of the airport generated business revenue generated by airport activity at Van Nuys Airport. As with the employment impact, the majority of revenue generated by airport activity is concentrated in the airport service sector.

Exhibit II-3
Airport Generated Business Revenue by Sector



Visitor Industry Revenue Impacts

The purchases made by air visitors to the Los Angeles area in 2006 generated \$175.8 million dollars of business revenue to hotels, restaurants, retail outlets, entertainment establishments and local transportation firms.

Non-Aviation Real Estate Revenue Impacts

The activity of the non-aviation real estate tenants generated \$500.2 million in revenue as the result of providing goods and services at their facilities located at the Van Nuys Airport.





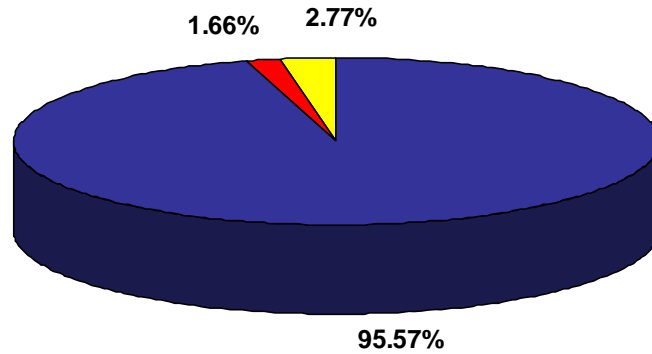
3. PERSONAL INCOME AND LOCAL CONSUMPTION IMPACTS

A total of \$707.3 million of wages and salaries were generated as the result of general aviation and passenger activity, as well as non-aviation activity at Van Nuys Airport, including the re-spending impact and indirect income impact.

Airport Generated Income Impacts

In 2006, the 2,068 direct employees earned \$130.6 million of wages and salaries from airport activity at Van Nuys Airport. This represents an average salary of \$63,140. The personal income impact is estimated based on the average wage and salaries for each job category multiplied by the corresponding job impact in that category. The distribution of the \$130.6 million of direct wage and salary income is distributed across the airport sectors as illustrated in **Exhibit II-4**.

Exhibit II-4
Airport Generated Personal Income by Sector



■ Airport Service ■ Ground Transportation ■ Construction/Consulting

Nearly 96% of the direct personal income impact is concentrated in the airport service sector. As noted earlier, about 90% of the employment impact is concentrated in this sector. The difference reflects the relatively higher paying jobs in corporate flight departments compared to salaries in other sectors.

The spending of the \$130.6 million of earned personal income within the Los Angeles area creates additional employment estimated as the induced jobs described in the Employment Impact. These induced jobs result in an additional \$233.7 million of





personal income and consumption purchases. Re-spending of income within a region is measured by a regional income multiplier. The size of the multiplier varies by region depending on the proportion of regional goods and services purchased by individuals. The higher this percentage, the lower the income leakage is out of the region.

It is to be emphasized that this re-spending effect measures the total re-spending and consumption impact in the Los Angeles region. However, the number of induced jobs reported here, which are generated by this re-spending of direct income, only includes jobs generated in the retail and wholesale sectors by consumer purchases. These are the jobs that are most likely to occur in the Los Angeles region. Other jobs due to the re-spending of income may not be local and so are not included in this analysis.

In addition to these induced retail and wholesale jobs, there are also additional induced and indirect jobs created to support purchases by those induced jobs in the wholesale and retail sectors, i.e. a second round of induced and indirect jobs. These second level induced and indirect jobs are not estimated, since it is not possible to identify with any degree of defensibility the geographic location where these second round induced and indirect jobs are created. Because the total number of induced and indirect jobs (second, third and fourth levels, etc.) generated by airport activity at Van Nuys Airport is not estimated, it is not possible to divide the induced income by the estimated induced jobs to estimate the salary and wage income associated with the estimated induced jobs. To do so would result in a gross overestimation of the personal income associated with the induced jobs.

In addition, the 1,639 indirect job holders received \$75.8 million of indirect wages and salaries. Combining the direct, induced and indirect income impact, the total local wage and salary impact of Van Nuys Airport activity is estimated at \$440.1 million in 2006.

Visitor Industry Income Impacts

The 2,031 individuals directly employed in the Los Angeles visitor industry as the result of expenditures by the 320,152 visitors to the area received \$42.3 million in wages and salaries. A portion of this personal income is also used for regional purchases of goods and services, creating induced jobs. Applying a personal income multiplier for the tourism industry in the Los Angeles area as developed by the Bureau of Economic Analysis, Regional Input/Output Modeling System, an additional \$39.7 million of re-spending is made in the local economy. These local purchases by the 2,031 directly employed in the visitors industry support an additional 666 induced jobs.





The local hotels, restaurants, and retail outlets impacted by the visitors made \$14.8 million of local purchases for supplies and support activities. These local purchases supported 445 indirect jobs, and received \$10.7 million of indirect income.

Combining the direct, induced and indirect income impacts, a total of \$92.8 million of direct, induced, indirect income was created by the visitors using Van Nuys Airport.

Non-Aviation Real Estate Income Impacts

The 1,542 directly generated jobs in the non-aviation real estate activity earned \$57.7 million of wages and salaries. As the result of re-spending of this income, an additional \$59.7 million of income and consumption expenditures were generated. The 884 indirect job holders received about \$57.1 million in wages and salaries.

Combining the direct, induced and indirect income impacts, a total of \$174.5 million of direct, induced, indirect income was created by the non-aviation real estate activity at Van Nuys Airport.

4. TAX IMPACTS

A total of \$79.9 million of state and local taxes were generated by airport activity, visitor activity and non-aviation real estate activity at Van Nuys Airport in 2006.

Airport Generated Taxes

Airport activity in 2006 generated government revenue through an assortment of tax payments by airport businesses and employees. The tax impacts are estimated at the state and local government levels.

To estimate the state and local tax impact, the share of income paid in state and local taxes was developed from data supplied for California by the Tax Foundation. These per income tax burdens were multiplied by the respective direct, induced and indirect wage and salary personal income generated in California as the result of airport activity in 2006.

Using these state and local tax indices, it is estimated that airport activity at Van Nuys Airport generated approximately \$49.7 million of state and local taxes in 2006.

Visitor Industry Tax Impacts

As the result of the visitors arriving via Van Nuys Airport, \$10.5 million of state and local taxes were generated.





Non-Aviation Real Estate Tax Impacts

As the result of non-aviation real estate activity at Van Nuys Airport, \$19.7 million of state and local taxes were generated.



III. ECONOMIC IMPACTS OF THE NON-ADDITION RULE AT VAN NUYS AIRPORT

In addition to estimating the economic impacts of passenger and general aviation activity as well as the non-aviation real estate activity at Van Nuys Airport, Martin Associates also analyzed the impacts of the Non-Addition Rule at the Airport.

1. NON-ADDITION RULE

The Non-Addition Rule was adopted by the Board of Airport Commissioners of the City of Los Angeles on July 28, 1999 and became effective on May 5, 2000. The NAR provides an additional noise abatement regulation for aircraft at Van Nuys Airport and amended the existing Van Nuys Noise Abatement and Curfew Ordinance of 1981.

In general, the NAR prohibits any additional Stage 2 aircraft, with take-off noise levels that equal or exceed 77dBA, that were not based at Van Nuys Airport during the calendar year 1999, from being based, parked, tied down or hangared at the Airport for more than 30 days in any calendar year, subject to the following exceptions.⁴

- Exemption A – Stage 3: The Non-Addition Rule does not apply to any aircraft certificated as Stage 3.
- Exemption B – Repair and Maintenance: A Stage 2 aircraft with a take-off noise level in excess of 77dBA may be parked, tied down or hangared at the Airport for more than 30 days for major repairs or refurbishment, required maintenance inspections or systems installations and warranty work if all of the following are fully satisfied:
 - The Airport Manager receives a written “work notice” prior to the day of arrival. This “work notice” must include the anticipated date of arrival, aircraft owner/ operator’s name, aircraft type, the “N” number, the individual or company contracted to perform the work, a description of the work, and approximate duration of stay; and
 - The aircraft is not being charged a tie-down or other user fee by an Airport tenant; and

⁴ Ordinance No. 173215, Board of Airport Commissioners of the City of Los Angeles, November 15, 1999.





- The aircraft owner/operator receives a written permit from the Airport Manager authorizing an exemption to the NAR prior to or within 24 hours of arrival; and
 - The aircraft owner/operator fully complies with all conditions and terms in the written permit granted by the Airport Manager; and
 - The aircraft owner/operator provides written notice to the Airport Manager of departure within 24 hours of departure from the Airport.
- Exemption C – Replacement: An exempt-based Stage 2 aircraft may be replaced with another Stage 2 aircraft exceeding 77dBA until December 31, 2005 if all of the following apply:
- The Stage 2 aircraft being replaced will no longer be based at Van Nuys Airport; and
 - The replacement Stage 2 aircraft does not have a take-off noise level exceeding 85dBA; and
 - The replacement Stage 2 aircraft cannot be parked, tied down or hangared at Van Nuys Airport for more than 30 days in any calendar year after January 1, 2011.

The replacement Stage 2 aircraft, with a take-off noise level exceeding 77dBA, will never receive an “Exempt-Based” status. The “Exempt-Based” aircraft received exempt status by being parked, tied down or hangared at Van Nuys Airport for 90 days or more during calendar year 1999. After January 1, 2006, only Stage 3 or Stage 2 aircraft with a take-off noise level that does not exceed 77dBA will be allowed as replacement aircraft.

2. STAGE 2 OPERATIONS AT VAN NUYS AIRPORT

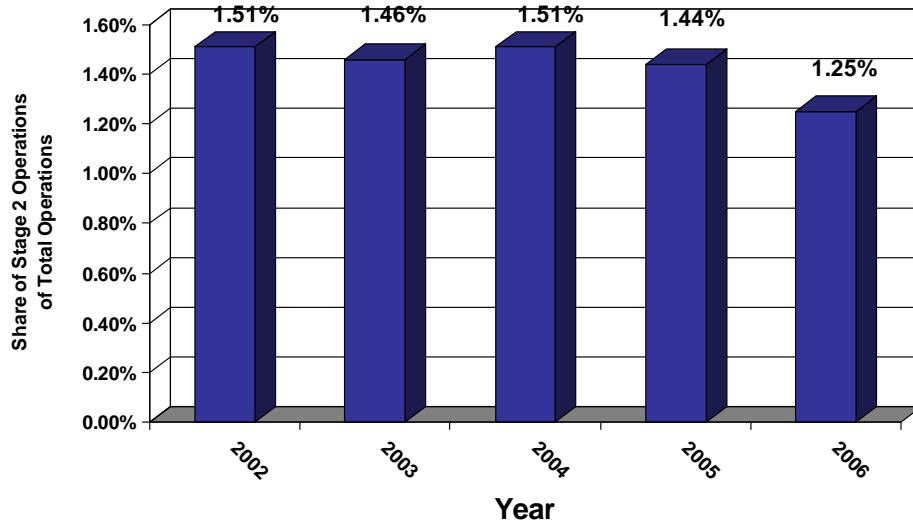
While the NAR reference year was 1999, due to legal challenges the actual enforcement of the NAR from official data did not occur until January 1, 2002. **Exhibit III-1**, on the following page, shows the Stage 2 aircraft operations as a percentage of total operations at Van Nuys from 2002 through 2006. As this Exhibit demonstrates, Stage 2 operations are a small share of total operations, accounting for less than 2% of total operations at Van Nuys each year. Stage 2 operations accounted for an annual average of 1.43% of total operations between 2002 and 2006. In 2006, there were 637 one-way transient Stage 2 operations (either a take-off or a landing),





excluding fly-overs and touch and go operations at VNY. These Stage 2 transient operations accounted for 0.6% of the total non-fly-over, non-touch and go transient operations at Van Nuys Airport.

Exhibit III-1
Share of Stage 2 Aircraft Operations of
Total Operations at Van Nuys
2002-2006

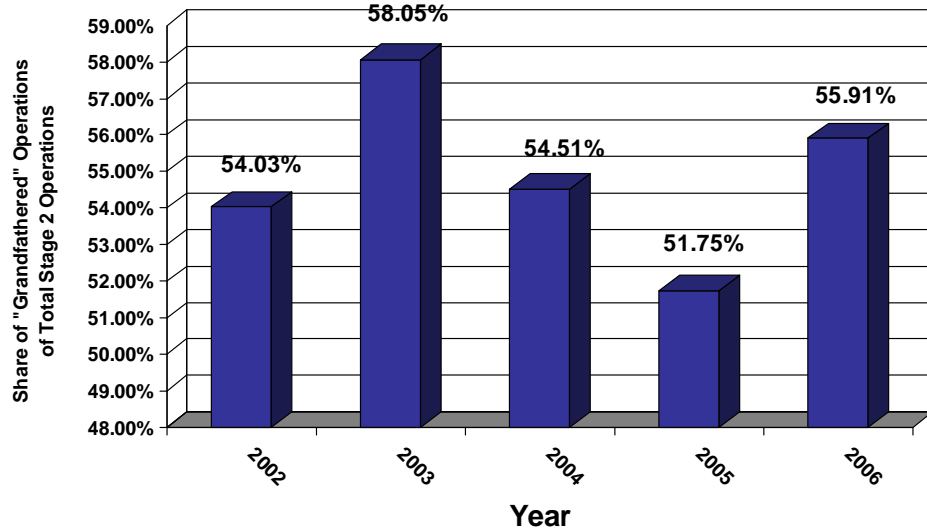


The “grandfathered” Stage 2 aircraft identified in 1999 at Van Nuys accounted for 6.8% of the total based aircraft in that year.⁵ The operations by these “grandfathered” Stage 2 aircraft have represented an annual average of 55.4% percent of the total number of Stage 2 operations at Van Nuys over the 2002-2006 period, as shown in **Exhibit III-2**. Applying this share (55.4%) to the average Stage 2 share of total operations at Van Nuys over the 2002-2006 period (1.434%), it is estimated that the “grandfathered” Stage 2 aircraft operations accounted for 0.8% of total operations at Van Nuys Airport over the 2002-2006 period.

⁵ Initially there were 54 “grandfathered” aircraft, which represents 6.8% of the total based aircraft (795) at Van Nuys Airport. Of these, 31 were Gulfstreams, 14 were McDonnell-Douglas, and 9 were Learjets.



Exhibit III-2
“Grandfathered” Stage 2 Aircraft Operations as a
Share of Total Stage 2 Operations
2002-2006

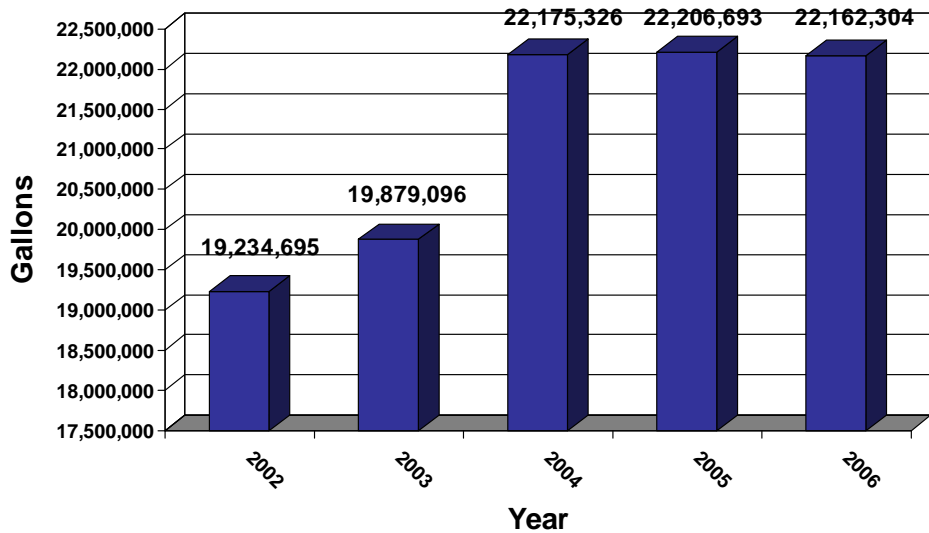


These findings indicate that since the enforcement of the ordinance in 2002, the NAR has impacted a relatively small share of aircraft based at Van Nuys Airport, and less than 2% of total operations. The operations of the “grandfathered” Stage 2 aircraft accounted for about 0.8% of total operations at Van Nuys Airport over the 2002-2006 period.

Another indicator of the impact of the NAR is the number of gallons of jet fuel sold at Van Nuys Airport since the NAR went into effect. If the NAR had a negative impact on jet operations at Van Nuys, then it would be anticipated that jet fuel sales would decline after 2002. However, as shown in **Exhibit III-3**, jet fuel sales in terms of gallons has actually increased substantially since 2002, with a significant jump in the gallons sold in 2004. The level of gallons sold has remained nearly constant since 2004 in the midst of declining total operations at Van Nuys. The increase in jet fuel sales, as measured in gallons since 2002 does not support a negative impact of the enactment of the NAR.



Exhibit III-3
Gallons of Jet Fuel Sold at Van Nuys Airport



Finally, to assess the impact of the NAR, Martin Associates interviewed the fixed-base operators located at Van Nuys Airport to determine how the implementation of the Non-Addition Rule impacted their activities. Three out of six fixed-base operators responded to the questions regarding the impacts of the NAR.

The fixed-base operators interviewed indicated that operations have been impacted by lost fuel sales, as well as lost revenue from hangar, office and other services provided to Stage 2 aircraft prior to the Non-Addition Rule enactment. However, the previous analysis of jet fuel sales does not support this argument by the fixed-base operators.

Based on the interviews with the fixed-base operators, they estimated the revenue lost due to the NAR was approximately \$1 million annually for each fixed-base operator between 2002 and 2006, representing less than 5% of total revenue generated by these three firms. The fixed-base operators also estimated about 40-50 operations were lost annually due to the restrictions imposed by the NAR. In terms of employment, approximately 2-4 jobs were affected annually by the decrease in Stage 2 operations. Furthermore, aircraft inventory was reduced by approximately 2-5 aircraft each year.

Lastly, the fixed-base operators indicated that these losses will taper off as the older aircraft are replaced, and as a result eventually some of the lost revenue will potentially be recovered over time providing no additional restrictions are applied to the Van Nuys Noise Abatement and Curfew Regulation.





Furthermore, the impacts of the NAR expressed by these three responding fixed-base operators represent their opinions only and are not substantiated through further analysis.

In conclusion, the Non-Addition Rule has been effective in decreasing the number of Stage 2 aircraft operations at Van Nuys Airport. Stage 2 operations have fallen over the 2002 to 2006 period, from 3,913 one-way operations in 2002 to 2,606 one-way operations in 2006 (either a take-off or a landing). This represents a decline of 33% over the period. In contrast, during this same period, total operations at Van Nuys Airport fell by 21% over the same period, from 498,477 total operations to 394,915 operations in 2006. A comparison of the reduction in operations suggests that due to a somewhat larger decline in Stage 2 operations compared to total operations, the NAR has been successful in reducing Stage 2 operations at Van Nuys. However, this restriction on Stage 2 aircraft does not appear to have had a significant impact on the aviation tenants at Van Nuys.



IV. COMPARISON OF ECONOMIC IMPACTS

The purpose of this chapter is to provide a comparison of the results of this current economic impact assessment of Van Nuys Airport with previous studies. The last comprehensive economic impact study of Van Nuys Airport was completed in 1987, with subsequent update studies in 1991 and 1998 which did not include a detailed survey of airport tenants but only an update of the earlier 1987 study.⁶

The Martin Associates Economic Impact Model is survey-based and represents 100% coverage of Van Nuys Airport tenants and service providers through telephone or personal interviews, not mailed surveys. The survey results from these detailed interviews are used to estimate the direct jobs, income and business revenue. The Martin Associates' methodology is more data intensive than other approaches and recognizes that the contribution to an economy of an airport cannot be reduced to a single number, but instead the impacts occur as jobs; personal income; business revenue; and state, local and Federal taxes. Furthermore, the methodology is designed for impacts to be estimated on a city, county and regional basis. Since the results are estimated at such disaggregate levels of detail, the results can be used for planning purposes, as well as to inform the community.

Because a detailed tenant survey was not conducted for the previous Economic Impact Study of Van Nuys Airport completed in 1998, the economic impact results of that study were based on data collected in 1987. The previous study therefore primarily reflected change due to airport activity. There have been significant changes in the aviation industry since 1987, to include the events of September 11, 2001, changes in the structure and operation of corporate and charter air service businesses, changes in aircraft types, fuel charges and airport service fees. Changes in the composition of non-aviation real estate tenants, implementation of the Non-Addition Rule, structural changes in based aircraft and aircraft operations have also resulted at Van Nuys Airport since 1987, which make comparisons between economic studies very difficult.

In addition to the structural shifts, different methodologies were utilized to estimate the economic impacts generated from airport activity at Van Nuys Airport in the previous studies. While the 1987 original study was based on a survey of airport tenants, the direct, induced and indirect impacts are generated simultaneously from the RIMSII Input-Output Model, which is an expenditure driven model. Conversely, in the current study, the direct impacts (jobs, personal income, business revenue) are developed from the interviews with the tenants, both aviation and non-aviation. An

⁶ "Economic Impact of Van Nuys Airport Update – 1998", Wilbur Smith Associates, September 1999

"Economic Impact of Van Nuys Airport", Wilbur Smith Associates, 1992

"Economic Impact of Van Nuys Airport – Executive Summary Report", Wilbur Smith Associates, 1988





induced model specific to the Los Angeles economy has been developed from Consumer Expenditure Survey Data in the most recent study which reflects the actual consumer behavior in the region. Indirect impacts are based on the results of the interviews with tenants as to the value and type of local purchases, and then this expenditure data is used as an input into the RIMSII Model developed for the Los Angeles region, which is only used to estimate the indirect impacts. In addition, the current study estimates the direct, induced and indirect impacts created by visitors using the airport, while in the previous studies, the visitors impact was reported under indirect impacts.

Due to the differences in methodology and measures of economic value used in the different studies, comparisons to the previous study will be confined to changes in direct and total job impacts.

1. COMPARISON OF OPERATIONAL FACTORS

Between 1998 and 2006, total operations decreased from 551,748 operations in 1998 to 394,915 operations in 2006, representing a 28% decrease in total operations since 1998. According to airport statistics provided by LAWA staff, the number of based aircraft declined slightly since 1998, from 730 based aircraft in 1998 to 725 based aircraft in 2006. However, the 1998 report identifies 712 based aircraft.

2. COMPARISON OF AIRPORT-GENERATED JOBS

With respect to the direct jobs, in 1998 a total of 1,568 direct aviation jobs were estimated, compared to 2,068 direct aviation jobs in 2006. Comparisons of changes in direct jobs can also be made for some job categories. However, the categorization of specific firms differs between the two studies. For example, in this current study, helicopter operations are separated into either government or maintenance/repair depending upon their actual operation. The jobs generated as a result of the fire and police helicopter activity is reported in the government category, whereas the maintenance and repair operations of helicopters are reported in the maintenance and repair category. Furthermore, the employment generated by LAWA is reported separately in this current study but reported in the government operations category in the previous 1998 study.

The number of jobs generated by the fixed-base operators decreased since 1998, from 418 direct jobs in 1998 to 378 direct jobs in 2006. The flight/ground school operations generated the same number of jobs between the two study periods, 58 direct jobs. Combining the corporate operations and air taxi/charter operations in 1998, 409 direct jobs were generated in these categories. In 2006, the corporate flight/charter operators generated 480 direct jobs.





3. COMPARISON OF TOTAL AVIATION IMPACTS

The 1998 study did not provide a separate estimate of the visitors industry impacts, but instead included these impacts as indirect impacts. In 2006, the direct, induced and indirect impacts in the visitors industry were estimated separately. As a result, direct comparisons of the visitors industry impacts cannot be made between 1998 and this current study. Therefore, only the total aviation related job impacts can be compared, which includes the visitor industry impacts.

In 2006, a total of 9,021 direct, induced and indirect jobs were generated by aviation activity, including the impact on the area visitors industry. This compares to a total aviation related job impact of 6,584 jobs estimated in 1998.

4. COMPARISON OF TOTAL AIRPORT JOB IMPACTS

In addition to the aviation related impacts, both the current study and the 1998 study estimated the economic impacts of the non-aviation related tenants. The 2006 study based the estimates on a detailed survey of each of the tenants, and developed direct, induced and indirect impacts. The 1998 study reported these impacts in total, and did not identify direct, induced and indirect impacts.

In 2006, the non-aviation related tenants generated 3,297 total jobs, compared to 3,443 total jobs with the non-aviation related tenants in 1998.

When the total impacts of the airport are combined, a total of 12,317 direct, induced and indirect jobs were created, compared to 10,027 in 1998.

