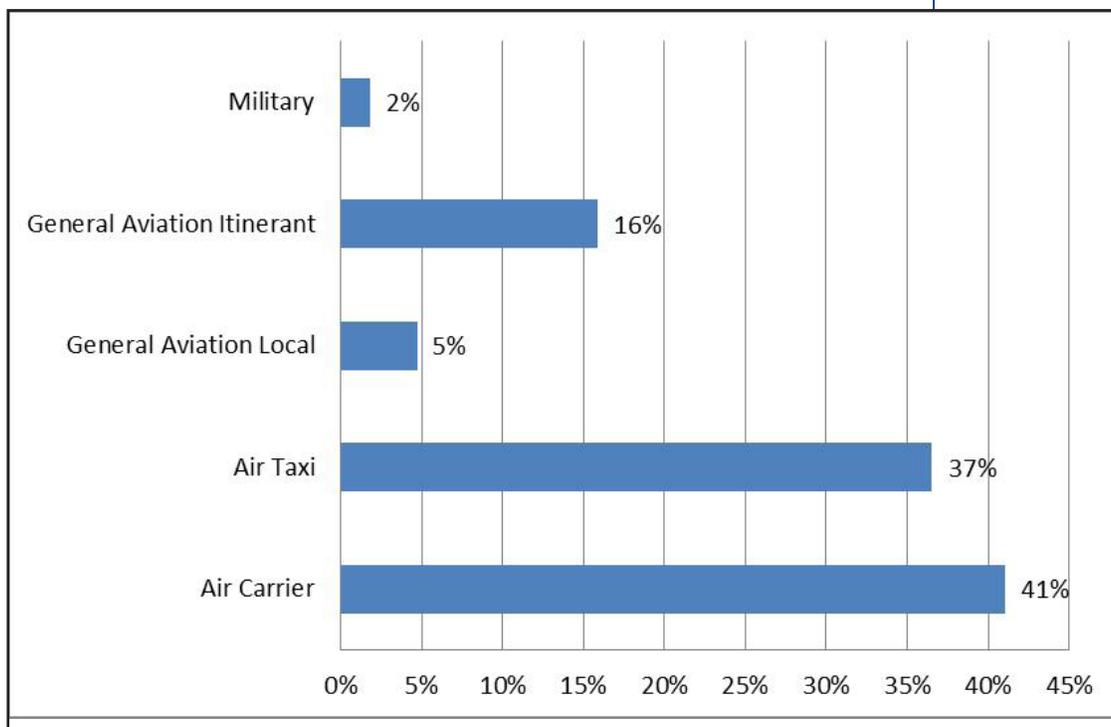


APPENDIX 9-A: AIRPORT SPECIFIC SUMMARIES

A. 1. MANCHESTER-BOSTON REGIONAL AIRPORT

Manchester-Boston Regional Airport (Manchester Airport) is New Hampshire's largest airport and only airport classified as a primary commercial service airport in the state. With annual enplanements of 1.2 million in 2013, it is the fourth largest airport in New England in terms of passenger volume. Handling 167.3 million pounds of goods in 2013, Manchester Airport is also the third largest in New England in terms of air cargo. General aviation, not including air taxi operations, accounted for 21 percent of the airport's operations in 2013 (Figure A1-1).

Figure A1-1 - Total Operations Manchester-Boston Regional Airport



Source: Chapter 3 NHSASP

The airport is located in Manchester on the border between Hillsborough and Rockingham counties. With 110,209 residents in 2012, Manchester is the largest city in the state in terms of population. The largest employers are in the health services (Elliot Hospital and Catholic Medical Center), utilities (PSNH, Fairpoint Communications, Comcast), banking (TD Bank, Citizens Bank), and education (Southern New Hampshire University and Saint Anselm College) sectors.

Economic Contribution

Manchester-Boston Regional Airport contributes to the New Hampshire economy and its local community in several ways. Not only does the airport provide employment to airport staff, it also supports additional

jobs at other businesses in the state through capital and operation and maintenance (O&M) expenditures by airport management and airport tenants, household spending by employees, and visitor spending (i.e., the multiplier effect). In addition to creating jobs, the airport's general aviation function contributes to the local economy by bringing local businesses closer to their customers and suppliers and allows business travelers to avoid the wait times for commercial flights, while still benefiting from the efficiencies of air travel.

Methodology

In 2009, Manchester Airport completed an economic impact study. The study's findings were based on a survey program of airport tenants and air passengers. The study reported that there were a total of 1,900 on-airport employees in 2008. Taking into account the multiplier effect of capital and O&M spending, the study reported a total economic impact of 3,820 jobs in Hillsborough, Rockingham, and Merrimack counties. The study estimated that visitors spent a total of \$377.6 million in 2008 and that this spending supported a total of \$752.8 million in sales revenue throughout the three-county region.

Figure A1-2 - Economic Impact Results Manchester Airport, 2008

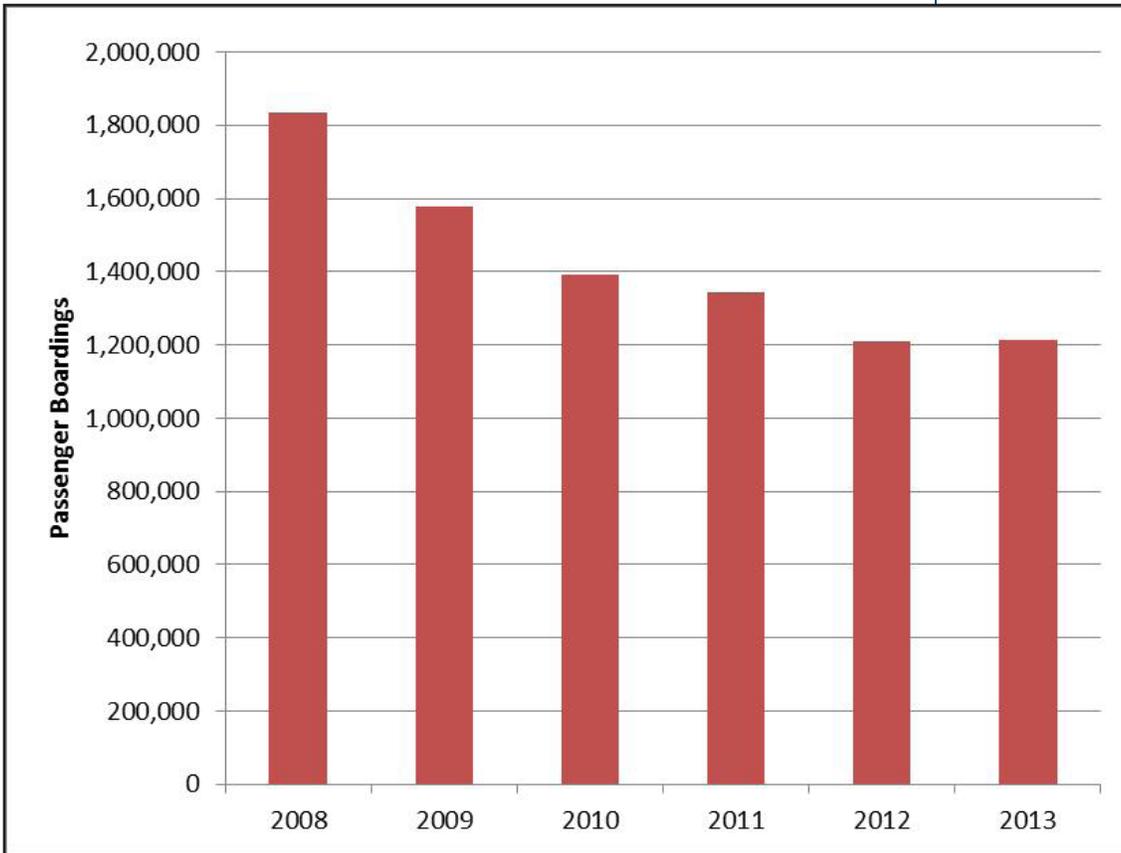
DIRECT AND TOTAL ECONOMIC IMPACT BY TYPE OF ORGANIZATION IN 2008 Manchester-Boston Regional Airport						
Type of organization	Employment (jobs)		Payroll (millions)		Total expenditures (millions)	
	Direct	Total	Direct	Total	Direct	Total
Passenger airlines	250	510	\$6.9	\$ 14.0	\$ 17.2	\$ 35.0
Cargo airlines	410	820	15.1	30.6	52.8	107.3
Rental car companies	190	320	5.6	9.5	26.2	44.4
Concessionaires/Terminal services	140	290	2.8	5.7	7.9	16.0
Fixed base operators/aviation support	140	280	5.7	11.6	20.4	41.5
Ground transportation	130	290	2.8	6.2	4.5	10.0
Government agencies	330	650	25.0	50.1	90.7	181.6
Other	310	660	11.9	25.2	22.7	47.5
Total	1,900	3,820	\$75.8	\$152.9	\$242.4	\$ 483.3
Air visitor expenditures (a)					<u>377.6</u>	<u>752.8</u>
Total expenditures in 2008					\$620.0	\$1,236.1

(a) Based on data contained in RKM Research and Communications, Inc., *Monthly Enplaning Passenger Survey*, June 2008.
Source: Jacobs Consultancy, July 2009, based on survey of on-Airport organizations conducted by RKM Research and Communications, Inc.

The 2009 report is the basis of the economic contribution estimates for the Manchester Airport reported in this study. The level of airport activity (i.e., passenger enplanements, general aviation operations, and cargo volumes) at Manchester has decreased significantly between 2008, the year that was analyzed for the 2009 study, and 2013, the year of analysis for this study (Figures A1-3 and A1-4). More specifically, between 2008 and 2013:

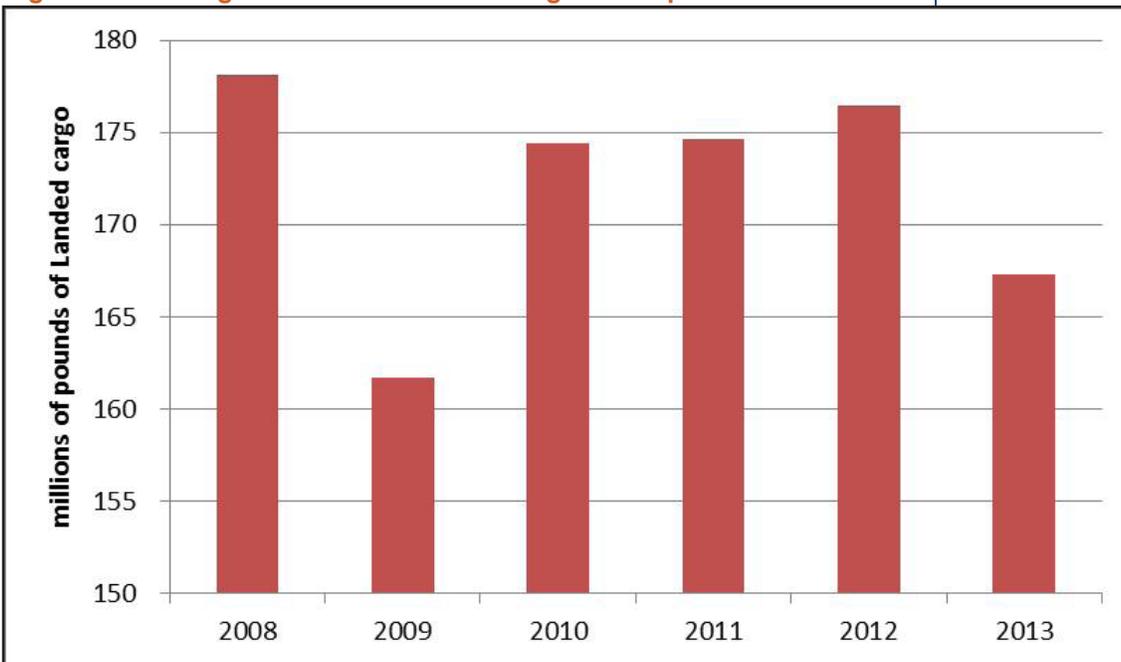
- The number of enplanements decreased by 35 percent
- The number of general aviation operations decreased by 16 percent
- Total cargo handled decreased by 6 percent

Figure A1-3 - Enplanement Manchester-Boston Regional Airport



Source: Manchester Airport

Figure A1-4 - Cargo Manchester-Boston Regional Airport



Source: Manchester Airport

To estimate 2013 on-airport employment, 2008 employment data reported in the 2009 study was adjusted proportionally to the change in enplanements, cargo, and overall New Hampshire employment (**Table A1-1**). The same approach was applied to estimate 2013 on-airport payroll and non-labor expenditures. The 2013 multiplier effect of on-airport activity was estimated by applying the multipliers from the 2009 study to the 2013 estimates.

Table A1-1 - 2013 Manchester-Boston Regional Airport On-Airport Job Estimates based on 2009 Study

	2008		2013/2008 Adjustment	2013	
	Direct Jobs	Total Jobs		Direct Jobs	Total Jobs
Passenger Airlines	250	510	0.65 *	163	332
Cargo Airlines	410	820	0.94 **	385	771
Concessionaires/Terminal Services	140	290	0.65 *	91	189
FBO/Aircraft Support	140	280	0.84 ^	118	235
Rental Car Companies	190	320	0.65 *	124	208
Ground Transportation	130	290	0.65 *	85	189
Government Agencies	330	650	0.74 ^^	244	481
Other Entities	310	660	0.98 ◇	304	647
Total	1900	3820		1513	3050

Source: The Louis Berger Group, 2009 Manchester Economic Impact Study

Note: * 2013/2008 enplanements; ** 2013/2008 cargo volumes; ^ 2013/2008 general aviation; ^^ Average of 2013/2008 enplanements and 2013/2008 cargo volumes; ◇ 2013/2008 statewide employment.

The 2009 Manchester Airport economic impact study reported that an estimated 51 percent of passengers at Manchester Airport were visitors, which was defined as persons not residing in Vermont, New Hampshire, Massachusetts, or Maine. The study reported that each visitor spent an average of \$459 per trip in 2008. To estimate 2013 visitor spending, the visitor percentage from the 2009 study was applied to the 2013 passenger count. Average spending per visitors was estimated by adjusted the 2008 amount for inflation to \$498. For adjusting the visitor spending pattern of the 2009 study for inflation, visiting air passengers spend nearly \$500 on food, lodging, and other purchases per visitor per trip.

While the 2009 study provided the basis for an estimated number of airport tenant employees and the multiplier effect of spending by on-airport tenants, other components of the economic contribution of Manchester Airport were analyzed independently from the 2009 study. For the purpose of this study, airport management provided information about the number of persons that they employed in 2013, as well as their payroll and other expenditures. In addition, recent information was obtained about the Airport Improvement Program projects at Manchester Airport. Input-output modeling techniques were used to estimate the additional economic activity (or multiplier effect) throughout the state triggered by capital spending and visitor spending. The spending impact is expressed in terms of jobs, labor income and output (or sales

revenue), and tax revenues. Cost savings for local businesses using general aviation for on-the-clock travel were also quantified as part of this study.

Findings

On-Airport Employment

In 2013 there were an estimated 1,513 jobs at Manchester Airport. Based on the management survey, 74 persons were employed by airport management. The remaining 1,439 on-airport employees work for airport tenant companies, including airlines, concessionaires, aircraft support, rental car companies, ground transportation, government agencies, and other entities.

Collectively, on-airport employees received an estimated \$66.2 million in employee compensation in 2013.

Capital Spending

Between 2010 and 2012, Airport Improvement Program (AIP) project costs at Manchester Airport averaged \$6.9 million per year. Project costs varied year to year, from \$4.9 million in FY2010 to \$9.3 million in FY2012. Major projects included building exhaust system modifications, drainage improvements, solar panel installation, and a terminal ramp replacement. AIP funds were also used for property acquisitions (e.g., runway 6 property acquisitions) and planning and assessments (e.g., wildlife hazard assessment, update of airport drainage plan and mitigation). Taking into account the multiplier effect, the airport's capital expenditures generated an average of 85 jobs per year, \$4.7 million in labor income, \$11.1 million in output, and \$0.05 million in tax revenue in the State of New Hampshire.

Operations and Maintenance Spending by Airport Management and Tenants

Operations and Maintenance expenditures by airport management and airport tenants support additional economic activity at businesses throughout the state. Taking into account the multiplier effect, this spending supported an estimated 1,538 jobs, \$66.1 million in labor income, \$220.1 million in output at other businesses throughout the state, and \$0.94 million in state business enterprise and business profit tax revenues.

Visitors

An estimated total of 1.2 million passengers arrived at Manchester Boston Regional Airport by commercial air service in 2013. An estimated 526,016 of these passengers were visitors and spent an estimated combined total of \$262.13 million on lodging, dining, entertainment, transportation, and retail in the State in 2013.¹

¹Based on the 2009 economic impact study, visitors – defined as persons residing outside of New Hampshire, Vermont, Maine, and Massachusetts – are assumed to account for 44 percent of the total arriving passengers and spent an average of \$498 (adjusted for inflation) per person per trip.

General aviation, not including air taxi, made up 21 percent of total operations at Manchester. An estimated 8,743 visitors spent an estimated \$1.92 million on lodging, meals, entertainment transportation and retail in the State in 2013.²

Accounting for the multiplier effect, commercial and general aviation visitor spending combined supported 3,882 jobs, \$131.22 million in labor income and \$403.37 million in output, at businesses located throughout New Hampshire, as well as \$22.01 million in business enterprise, business profit, and meals and room tax.

Travel Time Savings

An estimated 2,882 general aviation business flights, carrying an estimated 9,608 travelers, arrived or departed from Manchester in 2013.³ Businesses using the general aviation airports generated an estimated combined \$1.16 million in cost savings in 2013.

Summary

In 2013 Manchester-Boston Regional Airport supported an estimated total of 7,018 jobs, \$268.13 million in labor income, \$832.22 million in output, and \$23.73 million in tax revenue in New Hampshire. The airport also generated an estimated total of \$1.16 million in cost savings for local businesses relying on general aviation for business travel.

Table A1-2 - Overview Economic Contribution Manchester-Boston Regional Airport

	Jobs	Labor Income (in \$millions)	Output (in \$ millions)	Tax
On-Airport	1,513	\$66.12	\$197.61	\$0.73
Capital Spending	85	\$4.72	\$11.10	\$0.05
Operations and Maintenance Spending	1,538	\$66.07	\$220.14	\$0.94
Visitors Spending	3,882	\$131.22	\$403.37	\$22.01
Subtotal Spending impact	5,505	\$202.01	\$634.61	\$23.00
Grand total	7,018	\$268.13	\$832.22	\$23.73

Source: 2009 Manchester Airport Economic Study/Consultant Calculations

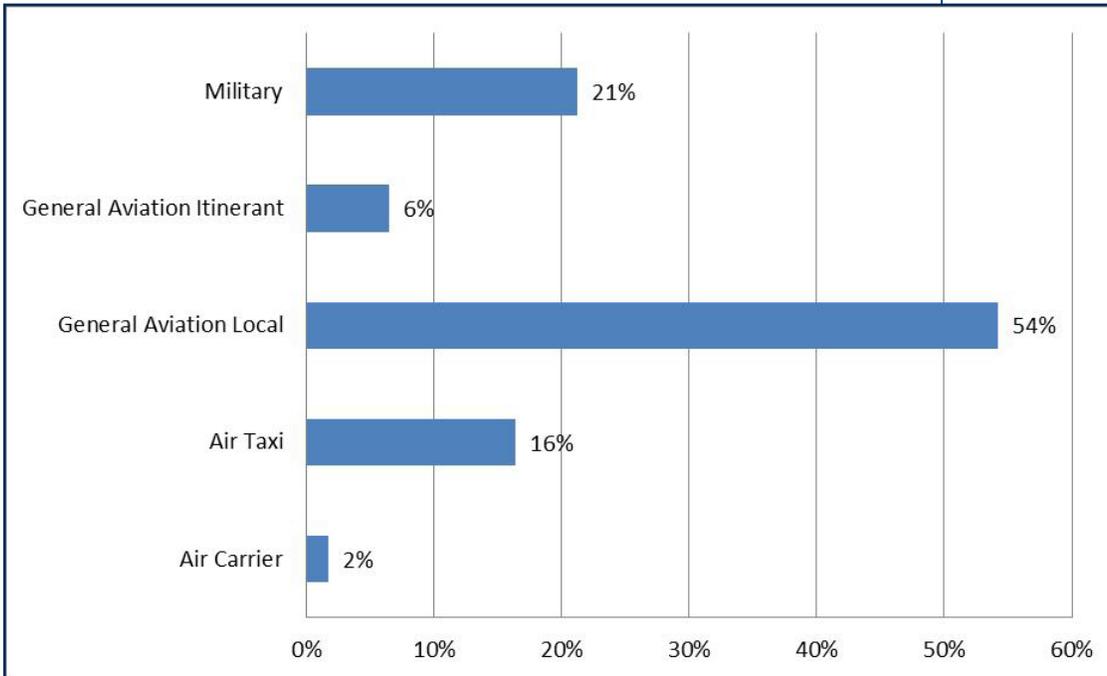
² Based on the survey conducted as part of this study and on data about similar airports in other New England states, it was assumed that 65 percent of itinerant operations are visiting aircraft, that the average number of visitors per aircraft is 2.8 p, and that the average general aviation visitor spent a total of \$220 per person per trip. More detailed information can be found in Appendix B.

³ Based on the survey conducted as part of this study and on the 2009 General Aviation survey prepared for the National Business Aviation Association and the General Aviation Manufacturers Association, it was assumed that 30 percent of itinerant operations were business travel and that the average number of passengers for these flights was 3.4. More detailed information can be found in Appendix B.

A.2. PORTSMOUTH INTERNATIONAL AIRPORT AT PEASE

The Portsmouth International Airport at Pease is located on the former Pease Air Force Base, in the city of Portsmouth in Rockingham County. The former military base was closed as part of the first Base Realignment and Closure (BRAC) Commission's review in 1989 and was redeveloped as a civilian airport with the New Hampshire Air National Guard remaining at the site. In 2013, military operations accounted for 21 percent of the operations in 2013. Created as part of the ongoing redevelopment of Pease Air Force Base, the site also includes the Pease International Tradeport (Tradeport), which is both a business and industrial park, and the Pease Golf Course. The Portsmouth International Airport at Pease, the Tradeport, the Port of Portsmouth, and the golf course are managed and operated by the Pease Development Authority (PDA), which is an independent state agency capable of managing their transportation, business, and recreational facilities. At the end of 2013, commercial service was reinstated with Allegiant Air offering several flights per week to Florida. In 2013, the number of commercial service/air taxi enplanements was 22,543, a 66.8 percent from 2012. General aviation, not including air taxi operations, accounted for 60 percent of the airport's operations in 2013 (Figure A2-1).

Figure A2-1 - Total Operations Portsmouth International Airport at Pease



Source: Chapter 3 NHSASP

Based on the most recent census data, Portsmouth had 21,379 residents in 2012. In that same year, employment totaled 29,274. The largest employers are in government (US Department of State and municipality), insurance (Liberty Mutual), and health care (HCN Regional Hospital) sectors. Portsmouth is New Hampshire's only deep water port. Portsmouth also has an historic seaport and is a summer tourist destination.

Located adjacent to the airport, Pease International Tradeport has one of the largest office space submarkets in the I-95 corridor. Based on the a June 2014 report prepared by the City of Portsmouth, Pease International Tradeport and airport has 2.1 million square feet of industrial space and 1.2 million square feet of office space.⁴ Vacancy rates are at a low, as follows: 2.6 percent for industrial and 7.4 percent for office space. The Tradeport has more than 250 tenants; almost 8,400 persons are employed at the Tradeport. An additional 60 acres is available for development at the Tradeport and 230 acres are available at the airport.

Economic Contribution

The Portsmouth International Airport at Pease contributes to the state and local economies in several ways. Not only does the airport provide on-airport employment, it supports additional jobs at other businesses in the state through capital and operation and maintenance (O&M) expenditures by airport management and airport tenants, household spending by employees and visitor spending (i.e., the multiplier effect). In addition to statewide job effects, the more than 250 businesses at the Tradeport benefit from their proximity to the airport. In addition to creating jobs, the airport contributes to the economy by bringing local businesses closer to their customers and suppliers and allows business travelers to avoid wait times of commercial flights while still benefiting from the efficiencies of air travel.

Methodology

Surveys were distributed to airport management and airport tenants to obtain information about on-site employment, payroll and other expenditures, and use of the airport for business purposes. Airport management, and five of seven major airport tenants at least partially completed the surveys that were distributed. In addition to specific general aviation airport visitor surveys, which were available at Port City Air for the duration of the economic data collection effort, FAA enplanement and operations data provided the basis for estimates of visiting air passengers and pilots. Input-output modeling techniques were used to estimate the additional economic activity (or multiplier effect) throughout the state triggered by spending by the airport management, tenants, employees, and visitors based on the data obtained from the surveys. The spending impact is expressed in terms of jobs, labor income and output (or sales revenue), and tax revenues. Cost savings for local businesses using general aviation for were quantified as part of this study.

Findings

On-Airport Employment

In 2013 there were an estimated 746 jobs at Portsmouth International Airport at Pease. The largest employers were the Air National Guard, Plane Sense, a fractional share aircraft company, and Port City Air, a full service fixed base operator, offering flight training, aircraft maintenance, and hangar and tie-down aircraft storage. Thirty-six persons were employed by airport management. Collectively on-airport employees received an estimated \$39.89 million in employee compensation in 2013.

⁴ City of Portsmouth, Economic Development, June 2014, <http://planportsmouth.com/masterplan/FinalPortsmouthEconomicDevelopmentBaseline.pdf>

Capital Spending

Airport Improvement Program (AIP) project costs at Pease Airport averaged \$1.28 million per year between 2010 and 2012. Project costs varied year to year, from \$0.72 million to \$2.21 million. Projects included airport marking and signage, designing and installing wildlife perimeter fencing, and the purchase of maintenance vehicles. Taking into account the multiplier effect, the airport's capital expenditures generate an average of 16 jobs per year, \$0.98 million in labor income, \$2.13 million in output, and \$10,000 in tax revenue for the State of New Hampshire.

Operations and Maintenance Spending by Airport Management and Tenants

Operations and Maintenance (O & M) expenditures by airport management and airport tenants support additional economic activity at businesses throughout the state. Based on the multiplier effect, O&M spending by the airport and its tenants in 2013 supported 443 jobs, \$21.16 million in labor income, and \$54.96 million in output at businesses located throughout New Hampshire, as well as \$0.24 million in business enterprise and business profit state tax revenue.

Visitors

While general aviation, including air taxi, accounted for 76 percent of the operations at Pease, most general aviation operations at Pease are local. An estimated 7,553 visitors spent an estimated \$1.66 million on lodging, meals, entertainment transportation, and retail in the State in 2013.⁵ Taking into account the multiplier effect, general aviation visitor spending supported the following at businesses located throughout New Hampshire: 24 jobs, \$0.83 million in labor income, and \$2.54 million in output. General aviation visitor spending also generated \$0.16 million in business enterprise, business profit, and meals and room tax.

Travel Time Savings

An estimated 2,490 general aviation business flights, carrying an estimated 8,466 travelers, arrived or departed from Pease in 2013.⁶ Businesses using the general aviation airports generate an estimated combined \$1.0 million in cost savings in 2013.

5 Based on the survey conducted as part of this study and on data on similar airports in other New England states, it was assumed that 65 percent of itinerant operations are visiting aircraft, that the average number of visitors per aircraft is 2.8 p, and that the average general aviation visitor spent a total of \$220 per person per trip. More detailed information can be found in Appendix B.

6 Based on the survey conducted as part of this study and on the 2009 General Aviation survey prepared for the National Business Aviation Association and the General Aviation Manufacturers Association, it was assumed that 30 percent of itinerant operations were business travel and that the average number of passengers for these flights was 3.4. More detailed information can be found in Appendix B.

Summary

In 2013 Portsmouth International Airport at Pease supported an estimated total of 1,229 jobs, \$62.95 million in labor income, \$191.93 million in output and \$0.95 million in tax revenue in New Hampshire. The airport also generated an estimated total of \$1.0 million in cost savings for local businesses relying on general aviation for business travel.

Table A2-1 - Overview Economic Contribution Portsmouth International Airport at Pease

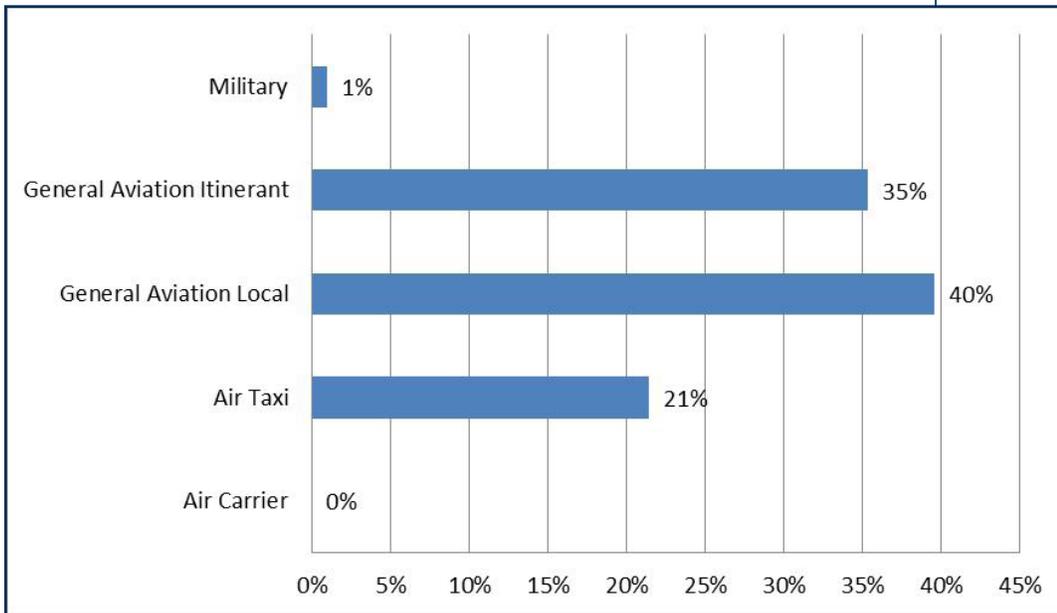
	Jobs	Labor Income (in \$millions)	Output (in \$ millions)	Tax
On-Airport	746	\$39.98	\$132.30	\$0.54
Capital Spending	16	\$0.98	\$2.13	\$0.01
Operations and Maintenance Spending	443	\$21.16	\$54.96	\$0.24
Visitors Spending	24	\$0.83	\$2.54	\$0.16
Subtotal Spending impact	483	\$22.97	\$59.63	\$0.41
Grand total	1,229	\$62.95	\$191.93	\$0.95

Source: Consultant Calculations

A.3. LEBANON MUNICIPAL AIRPORT

Lebanon Municipal Airport is a city-owned airport located in Lebanon, NH, in Grafton County, near the Vermont border. The airport is in proximity to Dartmouth-Hitchcock Medical Center, the state's only academic medical center and Level 1 Trauma Center in Lebanon and Dartmouth College, which is a private university located in Hanover with an enrollment of more than 6,000. As one of four tower-controlled airports in New Hampshire, Lebanon Municipal Airport offers daily commercial air service that connects passengers to Boston and White Plains, New York. Lebanon Municipal Airport is also considered a hub for those traveling to the Upper Valley for business and vacation. Annual enplanements on air taxi/commercial service in 2013 totaled 10,614. The airport offers scheduled service to Boston and New York City (White Plains). General aviation, not including air taxi, accounted 75 percent of the 31,772 operations in 2013. General aviation flights routinely fly non-stop from Lebanon to Canada, the continental U.S., Central America and Western Europe.

Figure A3-1 - Total Operations Lebanon Municipal Airport



Source: Chapter 3 NHSASP

In 2012 there were 13,483 residents in Lebanon. In that same year, employment totaled 18,499. The largest employers are in the health care sector (Dartmouth-Hitchcock Medical Center and Alice Peck Day/LifeCare) and manufacturing (Hypertherm and Timkin).

Economic Contribution

Lebanon Municipal Airport contributes to the New Hampshire economy and its local community in several ways. Not only does the airport provide on-airport employment, it supports additional jobs at other businesses throughout the state through capital and operation and maintenance (O&M) expenditures by airport management and airport tenants, household spending by employees, and visitor spending (i.e., the multiplier effect). In addition to creating jobs, the airport contributes to the economy by bringing local businesses closer to their customers and suppliers and allows business travelers to avoid the wait times for commercial flights, while still benefiting from the efficiencies of air travel.

Methodology

Surveys were distributed to airport management and airport tenants to obtain information about on-site employment, payroll, and other expenditures and use of the airport for business purposes. Airport management and seven airport tenants, at least partially, completed the surveys. FAA operations data provided the basis for estimates of visiting air passengers and pilots. Input-output modeling techniques were used to estimate the additional economic activity (or multiplier effect) throughout the state triggered by spending by the airport management, tenants, employees, and visitors based on the data obtained from the surveys. The spending impact is expressed in terms of jobs, labor income and output (or sales revenue), and tax revenues. Cost savings for local businesses using general aviation for on-the-clock travel were quantified as part of this study.

Findings

On-Airport Employment

In 2013 there were an estimated 66 jobs at Lebanon Municipal Airport. Tenants include a regional airline, helicopter sales, and car rental. Five persons were employed by airport management. Collectively on-airport employees received an estimated \$4.43 million in employee compensation in 2013.

Capital Spending

Airport Improvement Program (AIP) project costs at Lebanon Municipal Airport averaged \$0.30 million per year between 2010 and 2012. Project costs varied year to year, from \$0.07 million in FY2010 to \$0.68 million in FY2012. Projects included runway pavement repairs, environmental assessments, architecture, and engineering fees related to building expansion. Taking into account the multiplier effect, the airport's capital expenditures generate the following impacts in New Hampshire: an average of 4 jobs per year, \$0.26 million in labor income, \$0.57 million in output and a small amount of state tax revenue.

Operations and Maintenance Spending by Airport Management and Tenants

O&M expenditures by airport management and airport tenants support additional economic activity at businesses throughout the state. O&M spending by the airport and its tenants in 2013 supported 62 jobs, \$2.97 million in labor income, \$7.60 million in output at business located throughout New Hampshire, as well as \$0.03 million in business enterprise and business profit state tax revenue.

Visitors

An estimated total of 10,953 passengers arrived at Lebanon Municipal Airport by commercial air service in 2013. An estimated 4,841 of these passengers were visitors and spent an estimated combined total of \$2.41 million on lodging, dining, entertainment, transportation, and retail in 2013.⁷

⁷ Based on the 2009 economic impact study, visitors – defined as persons residing outside of New Hampshire, Vermont, Maine, and Massachusetts – are assumed to account for 44 percent of the total arriving passengers and spent an average of \$498 (adjusted for inflation) per person per trip.

General aviation accounted for 75 percent of the operations at Lebanon. An estimated 11,090 visitors spent a total of \$2.44 million in 2013.⁸ Taking into account the multiplier effect, commercial and general aviation visitor spending combined supported 36 jobs, \$1.21 million in labor income, and \$3.73 million in output at businesses throughout New Hampshire, as well as \$0.24 million in business enterprise, business profit, and meals and room tax.

Travel Time Savings

An estimated 3,656 general aviation business flights, carrying an estimated 12,431 travelers, arrived or departed from Lebanon in 2013.⁹ Businesses using the general aviation airports generate an estimated combined \$1.47 million in cost savings in 2013.

Community Benefits

The Lebanon air traffic control tower controls all air traffic within its area and thereby provides a valuable service to the Dartmouth-Hitchcock Advance Response Team (DHART) helicopter, which operates out of the Dartmouth-Hitchcock Medical Center in Lebanon by providing traffic advisories to the DHART pilots.

Locals also benefit from the aircraft flight school and the nationally-recognized full-service helicopter flight school, maintenance, and service facility. Finally, the airport reported that there is a business based in the Upper Valley that flies frequently out of the airport to Bermuda.

Summary

In 2013 Lebanon Municipal Airport supported an estimated total of 168 jobs, \$8.87 million in labor income, \$26.77 million in output, and \$0.33 million in tax revenue in New Hampshire. The airport also generated an estimated total of \$1.47 million in cost savings for local businesses for local businesses relying on general aviation for business travel.

Table A3-1 - Overview Economic Contribution Lebanon Municipal Airport

	Jobs	Labor Income (in \$ millions)	Output (in \$ millions)	Tax
On-Airport	66	\$4.43	\$14.87	\$0.06
Capital Spending	4	\$0.26	\$0.57	\$0.00
Operations and Maintenance Spending	62	\$2.97	\$7.60	\$0.03
Visitors Spending	36	\$1.21	\$3.73	\$0.24
Subtotal Spending impact	102	\$4.44	\$11.90	\$0.27
Grand total	168	\$8.87	\$26.77	\$0.33

Source: Consultant Calculations

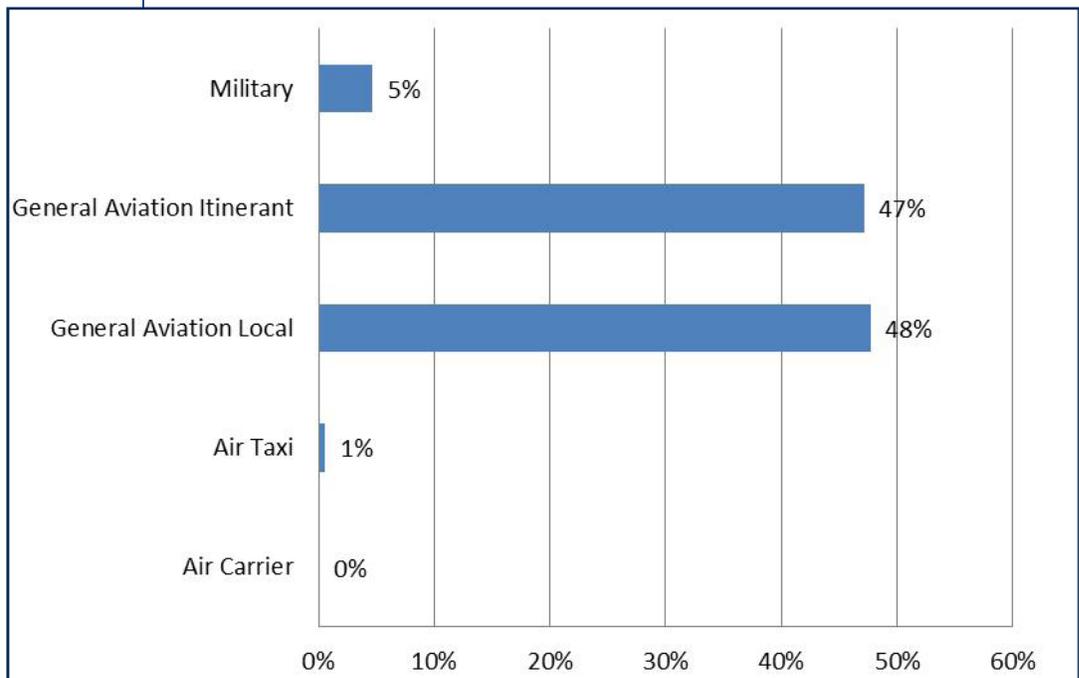
⁸ Based on the survey conducted as part of this study and about data on similar airports in other New England states, it was assumed that 65 percent of itinerant operations are visiting aircraft, that the average number of visitors per aircraft is 2.8 p, and that the average general aviation visitor spent a total of \$220 per person per trip. More detailed information can be found in Appendix B.

⁹ Based on the survey conducted as part of this study and on the 2009 General Aviation survey prepared for the National Business Aviation Association and the General Aviation Manufacturers Association, it was assumed that 30 percent of itinerant operations were business travel and that the average number of passengers for these flights was 3.4. More detailed information can be found in Appendix B.

A.4. BOIRE FIELD AT NASHUA

Boire Field, located in Nashua (the second most populous city in the state) in Hillsborough County near the Massachusetts border, is one of the busiest general aviation facilities in the state. For many of the corporate business aircraft, the airport serves as an alternative to Boston, MA and Portland, ME. The airport is operated and maintained by the Nashua Airport Authority. As part of the National Plan of Integrated Airport Systems (NPIAS), the FAA has designated the airport as a reliever to Manchester-Boston Regional Airport and Boston Logan Airport. However, the airport does not have any scheduled commercial service. Most of the airport's 52,354 operations are general aviation activity.

Figure A4-1 - Total Operations Boire Field



Source: Chapter 3 NHSASP

In 2012, Nashua had a population of 86,933. That same year employment was 49,873. The largest employer was BAE Systems, a major producer of aircraft self-protection systems and tactical surveillance and intelligence systems for all branches of the armed forces. Other large industries in terms of employment were health care (Southern New Hampshire Medical Center, Saint Joseph Hospital and Trauma Center), education, municipal services, and FAA. The latter employed almost 600 persons in Nashua in 2012.

Economic Contribution

Boire Field contributes to the New Hampshire economy and its local community in several ways. Not only does the airport provide on-airport employment, it supports additional jobs at other businesses throughout the state through capital and operation and maintenance (O&M) expenditures by airport management and airport tenants, household spending by employees, and visitor spending (i.e., the multiplier effect). In addition to creating jobs, the airport contributes to the economy by bringing local businesses closer to their customers and suppliers and

allows business travelers to avoid the wait times for commercial flights, while still benefiting from the efficiencies of air travel.

Methodology

Surveys were distributed to airport management and airport tenants to obtain information about on-site employment, payroll and other expenditures, and use of the airport for business purposes. Airport management and 8 out of 20 airport tenants, at least partially, completed the surveys. FAA operations data provided the basis for estimates of visiting air passengers and pilots. Input-output modeling techniques were used to estimate the additional economic activity (or multiplier effect) throughout the state triggered by spending by the airport management, tenants, employees, and visitors based on the data obtained from the surveys. The spending impact is expressed in terms of jobs, labor income and output (or sales revenue), and tax revenues. Cost savings for local businesses using general aviation for on-the-clock travel were quantified as part of this study.

Findings

On-Airport Employment

In 2013 there were an estimated 90 jobs at Boire Field. Tenants include FBOs providing services, such as flight training, aircraft maintenance, and hangar storage and aircraft maintenance facilities. Six persons were employed by airport management. Collectively on-airport employees received an estimated \$5.02 million in employee compensation in 2013.

Capital Spending

Airport Improvement Program (AIP) project costs at Boire Field averaged \$6.91 million per year between 2010 and 2012. Project costs varied year to year, from \$1.82 million in FY2010 to \$18.92 million in FY2011, when a runway reconstruction took place. Taking into account the multiplier effect, the airport's capital expenditures generate an average of 100 jobs per year, \$5.41 million in labor income, \$13.13 million in output, and \$0.06 million in tax revenue for the State of New Hampshire.

Operations and Maintenance Spending by Airport Management and Tenants

O&M expenditures by airport management and airport tenants support additional economic activity at businesses throughout the state. Through the multiplier effect, O&M spending by the airport and its tenants in 2013 supported 69 jobs, \$3.34 million in labor income, and \$8.43 million in output at business located throughout New Hampshire, as well as \$0.04 million in business enterprise and business profit state tax revenue.

Visitors

General aviation accounted for 99 percent of the operations at Boire Field. An estimated 28,533 visitors spent a total of \$6.28 million on lodging, meals, entertainment transportation, and retail in the State in 2013.¹⁰ Taking into account the multiplier effect,

¹⁰ Based on the survey conducted as part of this study and on data about similar airports in other New England states, it was assumed that 65 percent of itinerant operations are visiting aircraft, that the average number of visitors per aircraft is 2.8 p, and that

general aviation visitor spending supported 92 jobs, \$3.12 million in labor income, and \$9.59 million in output at businesses throughout New Hampshire, as well as \$0.61 million in business enterprise, business profit, and meals and room tax.

Travel Time Savings

An estimated 7,981 general aviation business flights, carrying an estimated 27,136 travelers, arrived or departed from Boire Field in 2013.¹¹ Businesses using the general aviation airports generate an estimated combined \$3.20 million in cost savings in 2013.

Summary

In 2013, Boire Field at Nashua supported an estimated total of 353 jobs, \$14.99 million in labor income, \$40.74 million in output and \$1.32 million in tax revenue in New Hampshire. The airport also generated an estimated total of \$3.20 million in cost savings for local businesses relying on general aviation for business travel.

Table A4-1 - Overview Economic Contribution Boire Field

	Jobs	Labor Income (in \$millions)	Output (in \$ millions)	Tax
On-Airport	92	\$3.12	\$9.59	\$0.61
Capital Spending	100	\$5.41	\$13.13	\$0.06
Operations and Maintenance Spending	69	\$3.34	\$8.43	\$0.04
Visitors Spending	92	\$3.12	\$9.59	\$0.61
Subtotal Spending impact	261	\$11.87	\$31.15	\$0.71
Grand total	353	\$14.99	\$40.74	\$1.32

Source: Consultant Calculations

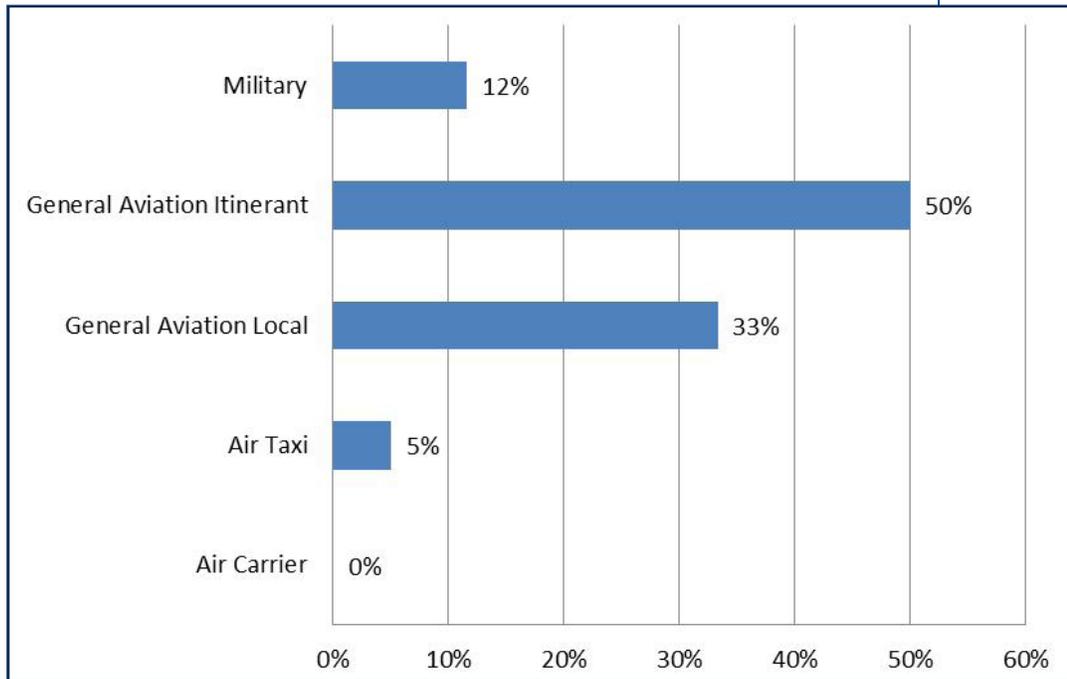
the average general aviation visitor spent a total of \$220 per person per trip. More detailed information can be found in Appendix B.

¹¹ Based on the survey conducted as part of this study and on the 2009 General Aviation survey prepared for the National Business Aviation Association and the General Aviation Manufacturers Association, it was assumed that 30 percent of itinerant operations were business travel and that the average number of passengers for these flights was 3.4. More detailed information can be found in Appendix B.

A.5. CONCORD MUNICIPAL AIRPORT

Concord Municipal Airport is located in Concord, the state's third most populous city, and situated in Merrimack County. In 2013 General aviation accounted for 88 percent of the airport's reported 60,000 operations, while military operations accounted for 12 percent of the airport's total operations. The airport does not have scheduled commercial service.

Figure A5-1 - Total Operations Concord Municipal Airport



Source: Chapter 3 NHSASP

Based on the most recent census data, Concord had 42,630 residents in 2012. The city is ranked third in terms of population among New Hampshire's incorporated cities and towns. Average employment in 2012 was 39,575. The largest employers in Concord include state government, Concord Hospital, and Steeplegate Mall. Located 18 miles from Manchester and 68 miles from Boston, the Concord Airport contributes significantly to the economy by providing services and facilities to the academic, financial, and Nascar industry who, among others, comprise the regular users of the airport.

Economic Contribution

Concord Municipal Airport contributes to the New Hampshire economy and its local community in several ways. Not only does the airport provide on-airport employment, it supports additional jobs at other businesses throughout the state through capital and operation and maintenance (O&M) expenditures by airport management and airport tenants, household spending by employees, and visitor spending (i.e., the multiplier effect). In addition to creating jobs, the airport contributes to the economy by bringing local businesses closer to their customers and suppliers and allows business travelers to avoid wait times of commercial flights while still benefiting from the efficiencies of air travel.

Methodology

Surveys were distributed to airport management and airport tenants to obtain information about on-site employment, payroll, and other expenditures and use of the airport for business purposes. Airport management and two out of four airport tenants, at least partially, completed the surveys. FAA operations data provided the basis for estimates of visiting air passengers and pilots. Input-output modeling techniques were used to estimate the additional economic activity (or multiplier effect) throughout the state triggered by the spending of airport management, tenants, employees, and visitors based on the data obtained from the surveys. The spending impact is expressed in terms of jobs, labor income and output (or sales revenue), and tax revenues. Cost savings for local businesses using general aviation for on-the-clock travel were quantified as part of this study.

Findings

On-Airport Employment

In 2013 there were an estimated 138 jobs at Concord Municipal Airport. Tenants include an FBO that provides maintenance, flight training, hangar and tie-down parking and fuel, the New Hampshire State Police, and the Army National Guard facility housing UH-60 Medevac helicopters. The municipality employed persons to operate the airport. Collectively on-airport employees received an estimated \$2.36 million in employee compensation in 2013.

Capital Spending

Airport Improvement Program (AIP) project costs at Concord Municipal Airport averaged \$0.25 million per year between 2010 and 2012. Project costs varied from year to year. Projects included environmental assessments and other studies. Taking into account the multiplier effect, the airport's capital expenditures generate an average of 4 jobs per year, \$0.26 million in labor income, \$0.48 million in output, and a small amount of tax revenue in the State of New Hampshire.

Operations and Maintenance Spending by Airport Management and Tenants

O&M expenditures by airport management and airport tenants support additional economic activity at businesses throughout the state. Through the multiplier effect, O&M spending by the airport and its tenants supported 26 jobs, \$1.28 million in labor income, and \$3.13 million in output at business located throughout New Hampshire, as well as \$0.01 million in business enterprise and business profit state tax revenue.

Visitors

General aviation accounted for 83 percent of the operations at Concord. An estimated 15,524 visitors spent a total of \$1.94 million on lodging, meals, entertainment transportation, and retail in the State in 2013.¹² Taking into account the multiplier effect, general aviation visitor spending supported 29 jobs, \$0.96 million in labor

¹² Based on the survey conducted as part of this study and about data on similar airports in other New England states, it was assumed that 33 percent of itinerant operations are visiting aircraft, that the average number of visitors per aircraft is 2.3 p, and that the average general aviation visitor spent a total of \$155 per person per trip. More detailed information can be found in Appendix B.

income, and \$2.96 million in output at businesses throughout New Hampshire, as well as \$0.19 million in business enterprise, business profit and meals and room tax.

Travel Time Savings

An estimated 9,900 general aviation business flights, carrying an estimated 33,660 travelers, arrived or departed from Concord in 2013.¹³ Businesses using the general aviation airports generate an estimated combined \$3.97 million in cost savings in 2013.

Summary

In 2013 Concord Municipal supported an estimated total of 106 jobs, \$4.86 million in labor income, \$12.01 million in output, and \$0.22 million in tax revenue in New Hampshire. The airport also generated an estimated total of \$3.97 million in cost savings for local businesses relying on general aviation for business travel.

Table A5-1 - Overview Economic Contribution Concord Municipal Airport

	Jobs	Labor Income (in \$millions)	Output (in \$ millions)	Tax
On-Airport	47	\$2.36	\$5.44	\$0.02
Capital Spending	4	\$0.26	\$0.48	\$0.00
Operations and Maintenance Spending	26	\$1.28	\$3.13	\$0.01
Visitors Spending	29	\$0.96	\$2.96	\$0.19
Subtotal Spending impact	59	\$2.50	\$6.57	\$0.20
Grand total	106	\$4.86	\$12.01	\$0.22

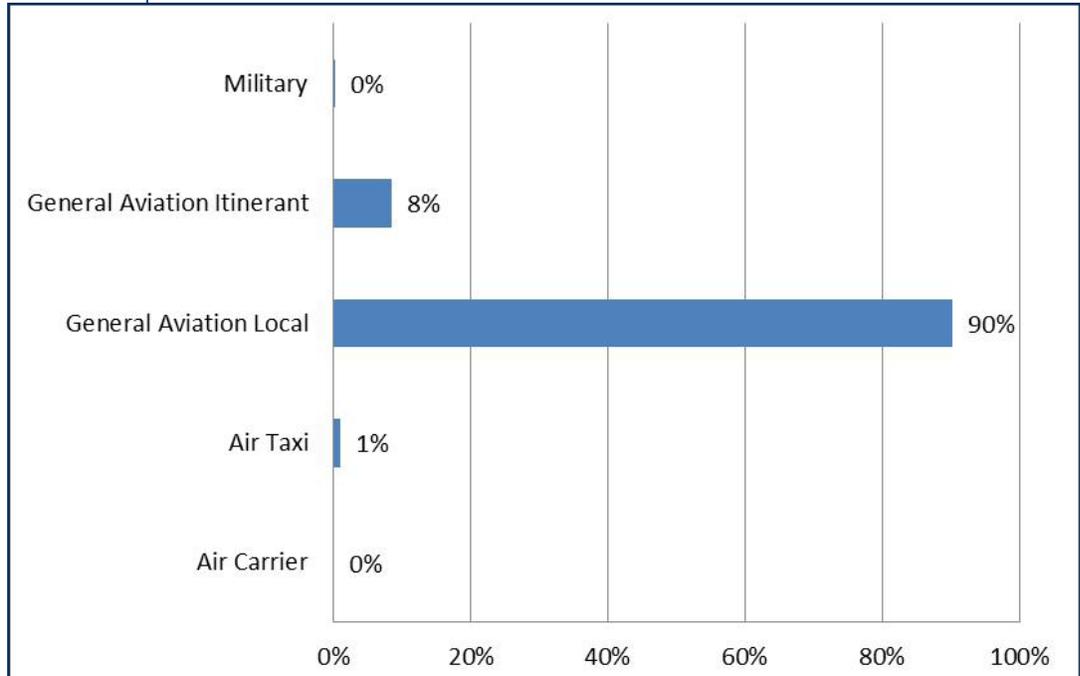
Source: Consultant Calculations

¹³ Based on the survey conducted as part of this study and on the 2009 General Aviation survey prepared for the National Business Aviation Association and the General Aviation Manufacturers Association, it was assumed that 30 percent of itinerant operations were business travel and that the average number of passengers for these flights was 3.4. More detailed information can be found in Appendix B

A.6. LACONIA MUNICIPAL AIRPORT

Laconia Municipal Airport is located in Gilford, in Belknap County, which is in the central region of the state. The airport's 43,725 operations were almost exclusively general aviation activity.

Figure A6-1 - Total Operations Laconia Municipal Airport



Source: Chapter 3 NHSASP

Gilford had a population of 7,136 in 2012. Employment was 3,006 in that same year. The largest employers are Gunstock Recreation Area and the Gilford school district. Neighboring Laconia had a population of 16,055 residents in 2012. In that same year, employment totaled 9,542. The largest employers are manufacturers, including Aavid Engineering Corp and New Hampshire Ball Bearings, Inc.

Economic Contribution

Laconia Municipal Airport contributes to the New Hampshire economy and its local community in several ways. In addition to the on-airport jobs and capital spending and operation and maintenance (O&M) expenditures by airport management and airport tenants, household spending by employees and visitor spending support jobs at other businesses throughout the state (i.e., the multiplier effect). In addition to creating jobs, the airport contributes to the economy by bringing local businesses closer to their customers and suppliers and allowing business travelers to avoid the wait times for commercial flights, while still benefiting from the efficiencies of air travel.

Methodology

Surveys were distributed to airport management and airport tenants to obtain information about on-site employment, payroll and other expenditures, and use of the airport for business purposes. Airport

management and five out of seven airport tenants, at least partially, completed the surveys. FAA operations data provided the basis for estimates of visiting air passengers and pilots. Input-output modeling techniques were used to estimate the additional economic activity (or multiplier effect) throughout the state triggered by spending by the airport management, tenants, employees, and visitors based on the data obtained from the surveys. The spending impact is expressed in terms of jobs, labor income and output (or sales revenue), and tax revenues. Cost savings for local businesses using general aviation for on-the-clock travel were quantified as part of this study.

Findings

On-Airport Employment

In 2013 there were an estimated 74 jobs at Laconia Municipal Airport. Tenants include two FBOs, a restaurant and a window repair company. Two persons were employed by airport management. Collectively on-airport employees received an estimated \$3.71 million in employee compensation in 2013.

Capital Spending

Airport Improvement Program (AIP) project costs at Laconia Municipal Airport averaged \$0.11 million per year between 2010 and 2012. Project costs varied year to year, from \$0.87 million in FY2012 to \$0.15 million in FY2011. Projects included wildlife perimeter fencing, permitting, and design and a master plan update. Taking into account the multiplier effect, the airport's capital expenditures generate an average of 2 jobs per year, \$0.11 million in labor income, \$0.23 million in output, and a small amount of tax revenue in the State of New Hampshire.

Operations and Maintenance Spending by Airport Management and Tenants

O&M expenditures by airport management and airport tenants support additional economic activity at businesses throughout the state. Through the multiplier effect, O&M spending by the airport and its tenants in 2013 supported 39 jobs, \$1.86 million in labor income, and \$4.72 million in output at business located throughout New Hampshire, as well as \$0.02 million in business enterprise and business profit state tax revenue.

Visitors

General aviation accounted for 99 percent of the operations at Laconia. An estimated 1,570 visitors spent a total of \$0.24 million on lodging, meal, entertainment transportation, and retail in the State in 2013.¹⁴ Taking into account the multiplier effect, general aviation visitor spending supported four jobs, \$0.12 million in labor income, and \$0.37 million in output at businesses throughout New Hampshire, as well as \$0.02 million in business enterprise, business profit, and meals and room tax.

¹⁴ Based on the survey conducted as part of this study and on data on similar airports in other New England states, it was assumed that 33 percent of itinerant operations are visiting aircraft, that the average number of visitors per aircraft is 2.3 p, and that the average general aviation visitor spent a total of \$155 per person per trip. More detailed information can be found in Appendix B.

Travel Time Savings

An estimated 1,241 general aviation business flights, carrying an estimated 4,220 travelers, arrived or departed from Laconia in 2013.¹⁵ Businesses using the general aviation airports travel generate an estimated combined \$0.50 million in cost savings in 2013.

Community Benefits

Laconia Airport hosts an annual open house for the public with free admission. In 2013 the open house was attended by a total of 3,000 persons. The event offers the public the opportunity to experience the general aviation airport up close and to learn about its benefits to the community through educational and fun exhibits. One of the most popular attractions was reasonably priced helicopter rides in a Robinson R-44 offered by C-R Helicopters from Nashua.

Other Benefits

During July and September two Sprint Cup races are held at the New Hampshire Motor Speedway in Loudon. Race teams and fans fly into Laconia Airport each year. The organization of the event as well off-site spending by spectators and race teams on lodging, food, and other expenditures generates economic activity throughout New Hampshire. The Southern New Hampshire University reported in 2011 that the economic impact of the two Sprint Cup races at New Hampshire Motor Speedway supports 2,500 jobs, \$179 million in spending, and \$103 million in income.

Summary

In 2013 Laconia Municipal Airport supported an estimated total of 119 jobs, \$5.80 million in labor income, \$12.06 million in output, and \$0.07 million in tax revenue in New Hampshire. The airport also generates an estimated total of \$0.50 million in cost savings for local businesses relying on general aviation for business travel.

Table A6-1 - Overview Economic Contribution Laconia Municipal Airport

	Jobs	Labor Income (in \$ millions)	Output (in \$ millions)	Tax
On-Airport	74	\$3.71	\$6.76	\$0.03
Capital Spending	2	\$0.11	\$0.21	\$0.00
Operations and Maintenance Spending	39	\$1.86	\$4.72	\$0.02
Visitors Spending	4	\$0.12	\$0.37	\$0.02
Subtotal Spending impact	45	\$2.09	\$5.30	\$0.04
Grand total	119	\$5.80	\$12.06	\$0.07

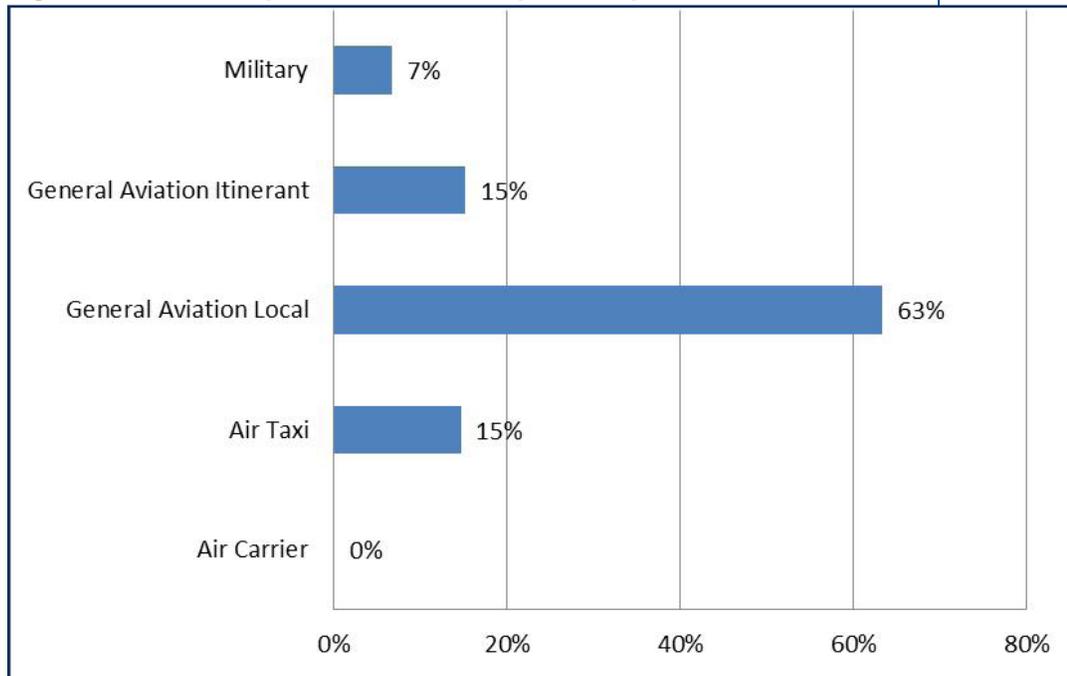
Source: Consultant Calculations

¹⁵ Based on the survey conducted as part of this study and on the 2009 General Aviation survey prepared for the National Business Aviation Association and the General Aviation Manufacturers Association, it was assumed that 30 percent of itinerant operations were business travel and that the average number of passengers for these flights was 3.4. More detailed information can be found in Appendix B.

A.7. DILLANT-HOPKINS AIRPORT

Dillant-Hopkins Airport is a general aviation airport located in Keene, in Cheshire County, in the southwestern region of the state. General aviation accounted for the majority (93 percent) of the airport's 49,026 operations. Military accounted for 7 percent. The airport does not offer scheduled commercial service.

Figure A7-1 - Total Operations Dillant-Hopkins Airport



Source: Chapter 3 NHSASP

In 2012 Keene had a population of 23,272, which ranks it as the 11th most populous among New Hampshire's incorporated cities and towns. Employment in 2012 was 18,824. The largest employers are Cheshire Medical Center, C&S Wholesale Grocers, and Keene State College. Manufacturer Timken Super Precision is also located in Keene.

Economic Contribution

Dillant-Hopkins Airport contributes to the New Hampshire economy and local community in several ways. Not only does the airport provide on-airport employment, it supports additional jobs at other businesses throughout the state through capital and operation and maintenance (O&M) expenditures by airport management and airport tenants, household spending by employees, and visitor spending (i.e., the multiplier effect). In addition to creating jobs, the airport contributes to the economy by bringing local businesses closer to their customers and suppliers and allows business travelers to avoid wait times of commercial flights while still benefiting from the efficiencies of air travel.

Methodology

In 2011 the City of Keene completed an economic impact study of Dillant-Hopkins Airport.¹⁶ The study's findings were based on a survey program of airport tenants with five out of seven tenants

¹⁶ Boyd Group International, Dillant-Hopkins Airport – Economic Impact and Opportunity Study, January 2012

responding to the survey. The study estimated the total on-airport employment in 2010 to be 47. The study also projected employment for 2011 and 2012 as 38 and 46, respectively. As part of the current study, surveys were distributed to airport management and airport tenants to obtain information about on-site employment, payroll and other expenditures, and use of the airport for business purposes. Airport management and two of the five airports, at least partially, completed the surveys, only one of which provided employment counts. Because of the low response rate, the 2012 projection from the 2011 study was used as the basis for the on-airport employment for the current study and it was assumed that employment remained stable between 2012 and 2013.

As part of the current study, input-output modeling techniques were used to estimate the additional economic activity (or multiplier effect) throughout the state triggered by spending by the airport management, tenants, employees, and visitors based on the data obtained from the surveys. The spending impact is expressed in terms of jobs, labor income and output (or sales revenue), and tax revenues. Cost savings for local businesses using general aviation were also quantified as part of this study.

Findings

On-Airport Employment

In 2013 there were an estimated 46 jobs at Dillant-Hopkins Airport. Three persons were employed to manage and maintain the airport; the remaining jobs were at airport tenant businesses. Tenants included a full service FBO and corporate flight department. Collectively on-airport employees received an estimated \$3.25 million in employee compensation in 2013.

Capital Spending

Airport Improvement Program (AIP) project cost at Dillant-Hopkins Airport averaged \$2.05 million per year between 2010 and 2012. Project cost varied year to year, from \$0.35 million in FY2010 to \$5.37 million in FY2012. Projects included runway rehabilitation and rehabilitation of a hazard beacon. Taking into account the multiplier effect, the airport's capital expenditures generated an average of 29 jobs per year, \$1.58 million in labor income, \$3.84 million in output, and \$0.02 million in tax revenue in the State of New Hampshire.

Operations and Maintenance Spending

O&M expenditures by airport management and airport tenants support additional economic activity at businesses throughout the state. Through the multiplier effect, O&M spending by the airport and its tenants in 2013 supported 44 jobs, \$2.12 million in labor income, and \$5.48 million in output at business located throughout New Hampshire, as well as \$0.02 million in business enterprise and business profit state tax revenue.

Visitors

General aviation accounted for 79 percent of the operations at Dillant-Hopkins. An estimated 5,563 visitors spent an estimated total of \$0.86 million on lodging, meals, entertainment transportation,

and retail in the State in 2013.¹⁷ Taking into account the multiplier effect, general aviation visitor spending supported 13 jobs, \$0.43 million in labor, and \$1.32 million in output at businesses throughout New Hampshire, as well as \$0.08 million in business enterprise, business profit, and meals and room tax.

Travel Time Savings

An estimated 4,498 general aviation business flights, carrying an estimated 14,952 travelers, arrived or departed from Dillant-Hopkins in 2013.¹⁸ Businesses using the general aviation airports saved an estimated combined \$1.76 million in 2013.

Community Benefits

C&S Wholesale Grocers, based in Keene, is one of the largest wholesale food distribution companies in the country. C&S uses their corporate aircraft based at Dillant-Hopkins Airport to connect with customers and vendors who are not located near commercial airports. The company has also been involved in humanitarian flying and disaster relief, including flights from to Haiti after the 2010 earthquake and to New Jersey following Superstorm Sandy in 2012.

Summary

In 2013 Dillant-Hopkins Airport supported an estimated total of 132 jobs, \$7.38 million in labor income, \$21.44 million in output, and \$0.16 million in tax revenue in New Hampshire. By providing access to general aviation, Dillant-Hopkins also generated an estimated total of \$1.76 million in cost savings for local businesses.

Table A7-1 - Overview Economic Contribution Dillant-Hopkins Airport

	Jobs	Labor Income (in \$ millions)	Output (in \$ millions)	Tax
On-Airport	46	\$3.25	\$10.80	\$0.04
Capital Spending	29	\$1.58	\$3.84	\$0.02
Operations and Maintenance Spending	44	\$2.12	\$5.48	\$0.02
Visitors Spending	13	\$0.43	\$1.32	\$0.08
Subtotal Spending impact	86	\$4.13	\$10.64	\$0.12
Grand total	132	\$7.38	\$21.44	\$0.16

Source: Consultant Calculations

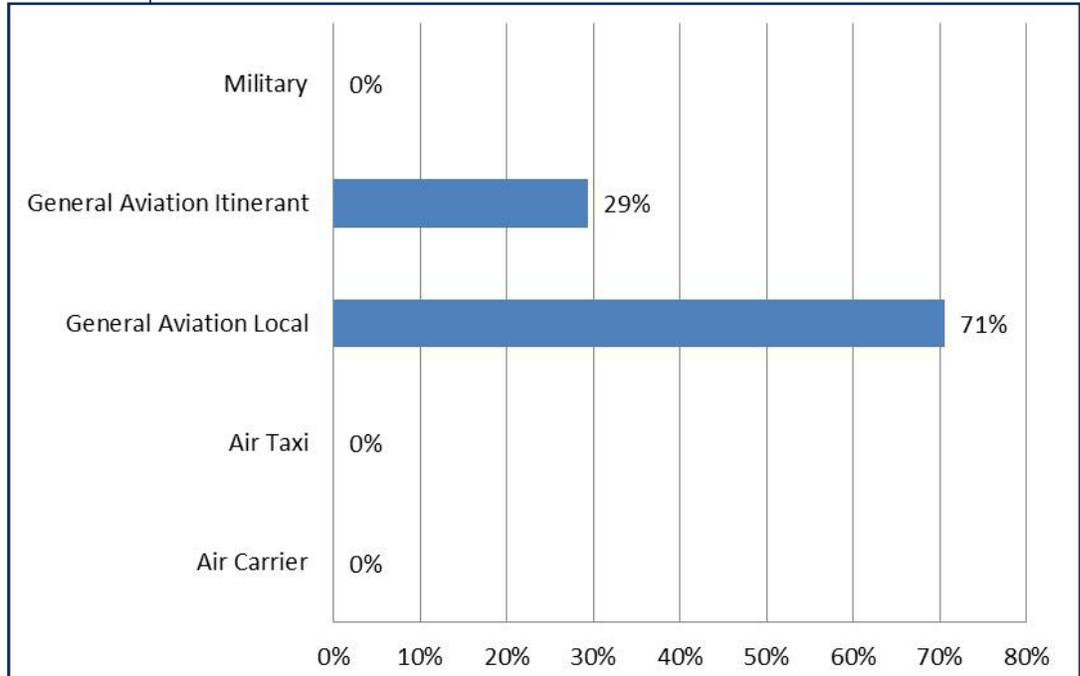
¹⁷ Based on the survey conducted as part of this study and on data about similar airports in other New England states, it was assumed that 33 percent of itinerant operations are visiting aircraft, that the average number of visitors per aircraft is 2.3 p, and that the average general aviation visitor spent a total of \$155 per person per trip. More detailed information can be found in Appendix B.

¹⁸ Based on the survey conducted as part of this study and on the 2009 General Aviation survey prepared for the National Business Aviation Association and the General Aviation Manufacturers Association, it was assumed that 30 percent of itinerant operations were business travel and that the average number of passengers for these flights was 3.4. More detailed information can be found in Appendix B.

A.8. SKYHAVEN AIRPORT

Skyhaven Airport is located in the City of Rochester, in Strafford County. The airport is owned and operated by the Pease Development Authority. All of the airport's 17,000 operations are general aviation.

Figure A8-1 - Total Operations Skyhaven Airport



Source: Chapter 3 NHSASP

Rochester had 29,823 residents in 2012. It ranks sixth in terms of population among New Hampshire's incorporated cities and towns. Employment in 2012 was 10,732. The largest employers are the City (education and municipal services), Frisbie Memorial Hospital, supermarket distribution and warehouse centers, and Albany Engineered Products, an aerospace manufacturing company.

Economic Contribution

As a general aviation airport, Skyhaven provides many benefits to the community, ranging from emergency preparedness, to opportunities for businesses to travel to their customers and suppliers by general aviation, to recreational opportunities.

Methodology

Surveys were distributed to airport management and airport tenants to obtain information about on-site employment, payroll, and other expenditures and use of the airport for business purposes. Airport management, at least partially, completed the survey, but the tenants did not. FAA operations data provided the basis for the estimates involving visiting air passengers and pilots. Input-output modeling techniques were used to estimate the additional economic activity (or multiplier effect) throughout the state triggered by spending by the airport management, tenants, employees, and visitors based on the data obtained from the surveys. The spending impact is expressed in terms of jobs, labor income and output (or sales

revenue), and tax revenues. Cost savings for local businesses using general aviation for on-the-clock travel were quantified as part of this study.

Findings

On-Airport Employment

In 2013 there were an estimated 3 jobs at Skyhaven Airport. One person was employed by the Pease Development Authority to manage the airport. Tenants included an aircraft maintenance shop and flight school and employed an estimated two persons.

Capital Spending

The Airport Improvement Program (AIP) did not include any projects at Skyhaven Airport between 2010 and 2012, with the exception of land acquisition for the Runway 33 approach. Property acquisition does not generate employment.

Operations and Maintenance Spending by Airport Management and Tenants

Operations and maintenance (O&M) expenditures by airport management and airport tenants supported an additional 2 jobs at business located throughout New Hampshire.

Visitors

General aviation accounted for 100 percent of the operations at Skyhaven. An estimated 1,650 visitors spent an estimated total of \$0.19 million on lodging, meals, entertainment transportation, and retail in the State in 2013.¹⁹ Taking into account the multiplier effect, general aviation visitor spending supported 3 jobs, \$0.01 million in labor income, and \$0.28 million in output at businesses throughout New Hampshire, as well as \$0.02 million in business enterprise, business profit, and meals and room tax.

Travel Time Savings

An estimated 250 general aviation business flights, carrying an estimated 850 travelers, arrived or departed from Skyhaven Airport in 2013.²⁰ Businesses using the general aviation airports saved an estimated combined \$0.10 million in 2013.

¹⁹ Based on the survey conducted as part of this study and on data about similar airports in other New England states, it was assumed that 33 percent of itinerant operations are visiting aircraft, that the average number of visitors per aircraft is 2.0 p, and that the average general aviation visitor spent a total of \$113 per person per trip. More detailed information can be found in Appendix B.

²⁰ Based on the survey conducted as part of this study and on the 2009 General Aviation survey prepared for the National Business Aviation Association and the General Aviation Manufacturers Association, it was assumed that 5 percent of itinerant operations were business travel and that the average number of passengers for these flights was 3.4. More detailed information can be found in Appendix B.

Summary

Skyhaven Airport supported 8 jobs, \$0.33 million in labor income, \$1.02 million in output and \$0.04 million in business enterprise, business profit, and meal and room tax. By providing access to general aviation, Skyhaven also generated an estimated \$0.10 million in cost savings for local businesses.

Table A8-1 - Overview Economic Contribution Skyhaven Airport

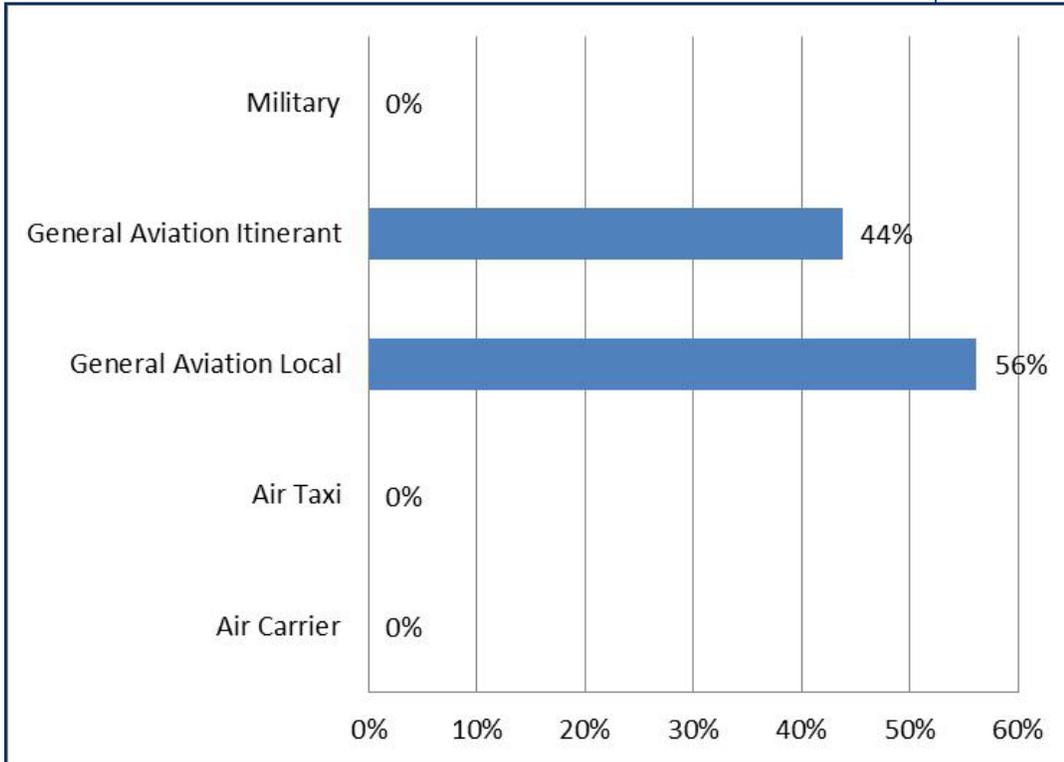
	Jobs	Labor Income (in \$ millions)	Output (in \$ millions)	Tax
On-Airport	3	*	*	\$0.00
Capital Spending	0	\$0.00	\$ \$0.00	\$0.00
Operation and Maintenance Spending	2	*	*	\$0.00
Visitors Spending	3	\$0.10	\$0.28	\$0.02
Grand Total	8	\$ 0.33	\$ 1.02	\$0.04

*Not disclosed
Source: Consultant Calculations

A.9. CLAREMONT MUNICIPAL AIRPORT

Claremont Municipal Airport is located in the City of Claremont, in Sullivan County, which is in the southwestern region of the state. All 10,500 operations are general aviation.

Figure A9-1 - Total Operations Claremont Municipal Airport



Source: Chapter 3 NHSASP

Based on the latest census data, Claremont had 13,077 residents in 2012. Average employment in 2012 was 5,899. The largest employers are the Claremont school district, Valley Regional Health Care, and Wal-Mart.

The southwestern region of the state had a population of 119,889 in 2012, accounting for 11 percent of the state's total population. The region's population growth since 1980 has been lower than that of the state as a whole in every decade with the exception of 2000 to 2010. Projections show that regional growth will continue to be slower than the state average, except for the 2030 to 2040 decade when the region is projected to grow faster. Employment in the southwestern region in 2013 was 45,720, which is 7 percent of total state employment. The southwestern region has proportionally more employment in manufacturing than the rest of the state.

Economic Contribution

As a general aviation airport, Claremont Municipal Airport provides many benefits to the community, ranging from emergency preparedness to opportunities for businesses to travel to their customers and suppliers by general aviation, as well as recreational opportunities.

Methodology

A survey was provided to airport management to obtain information about on-site employment, payroll and other expenditures, and use of the airport for business purposes and it was returned, at least partially, completed. FAA operations data provided the basis for estimates of visiting air passengers and pilots. Input-output modeling techniques were used to estimate the additional economic activity (or multiplier effect) throughout the state triggered by spending by the airport management, tenants, employees, and visitors based on the data obtained from the surveys. The spending impact is expressed in terms of jobs, labor income and output (or sales revenue), and tax revenues. Cost savings for local businesses using general aviation for on-the-clock travel were quantified as part of this study.

Findings

On-Airport Employment

In 2013 one person was employed to manage the airport. Claremont Municipal Airport includes one fixed based operator who employs an estimated 2 employees

Capital Spending

Airport Improvement Program (AIP) project cost at Claremont Municipal Airport averaged \$0.25 million per year between 2010 and 2012. Project cost varied year to year, from \$0.08 million in FY2012 to \$0.46 million in FY2010. Projects included design and structural study of the old hangar. Taking into account the multiplier effect, the airport's capital expenditures generated an average of four jobs per year, \$0.20 million in labor income, \$0.47 million in output, and a small amount in tax revenue for the State of New Hampshire.

Operations and Maintenance Spending by Airport Management and Tenants

Through the multiplier effect, operations and maintenance (O&M) spending by the airport supported 4 jobs at business located throughout New Hampshire.

Visitors

General aviation accounted for 100 percent of the operations at Claremont. An estimated 1,518 visitors spent an estimated total of \$0.19 million on lodging, meals, entertainment transportation, and retail in the State in 2013.²¹ Taking into account the multiplier effect, general aviation visitor spending supported three jobs, \$0.09 million in labor income, and \$0.28 million in output at businesses throughout New Hampshire, as well as \$0.02 million in business enterprise, business profit, and meals and room tax.

²¹ Based on the survey conducted as part of this study and on data about similar airports in other New England states, it was assumed that 33 percent of itinerant operations are visiting aircraft, that the average number of visitors per aircraft is 2.0 and that the average general aviation visitor spent a total of \$113 per person per trip. More detailed information can be found in Appendix B.

Travel Time Savings

An estimated 46 general aviation business flights, carrying an estimated 156 travelers, arrived or departed from Claremont in 2013.²² Businesses using the general aviation airports saved an estimated combined \$0.02 million in 2013.

Summary

Claremont Municipal Airport supported 14 jobs, \$0.57 million in labor income, \$1.79 million in output, and \$0.02 million in business enterprise, business profit, and meal and room tax. By providing access to general aviation, Claremont also generated an estimated \$0.02 million in cost savings for local businesses.

Table A9-1 - Overview Economic Contribution Claremont Municipal Airport

	Jobs	Labor Income (in \$ millions)	Output (in \$ millions)	Tax
On-Airport	3	*	*	\$0.00
Capital Spending	4	\$0.20	\$0.47	\$0.00
Operations and Maintenance Spending	4	*	*	\$0.00
Visitors Spending	3	\$0.09	\$0.28	\$0.02
Grand total	14	\$0.57	\$1.79	\$0.02

*Not disclosed

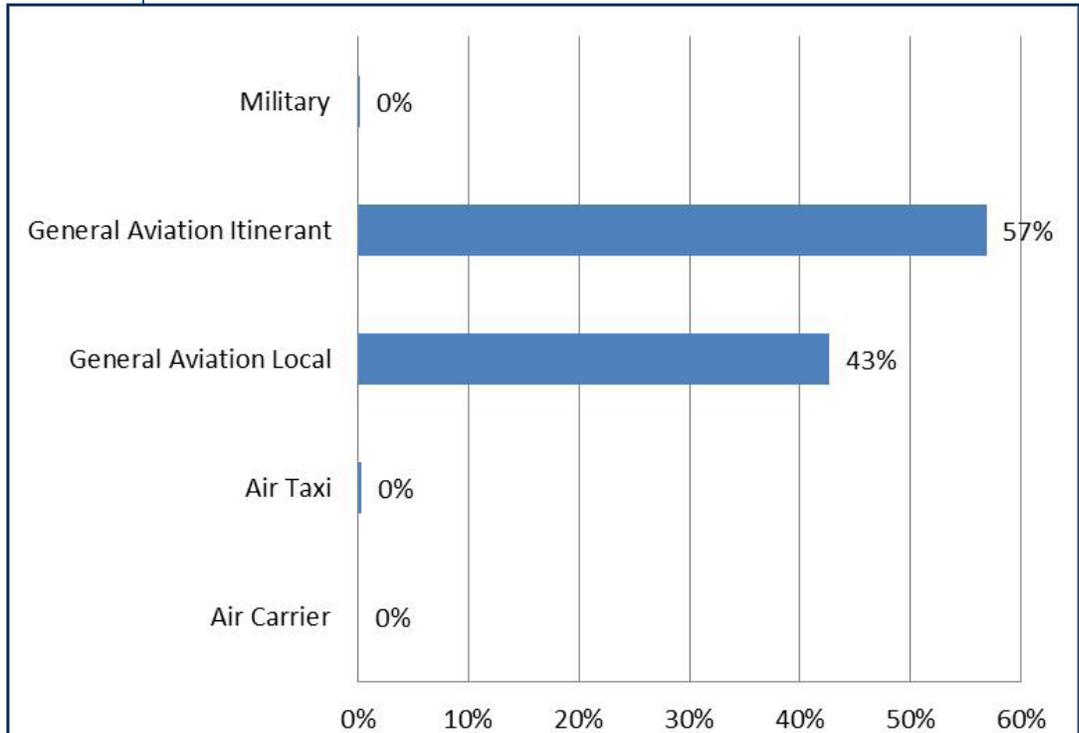
Source: Consultant Calculations

²² Based on the survey conducted as part of this study and on the 2009 General Aviation survey prepared for the National Business Aviation Association and the General Aviation Manufacturers Association, it was assumed that 1 percent of itinerant operations were business travel and that the average number of passengers for these flights was 3.4. More detailed information can be found in Appendix B.

A.10. MT. WASHINGTON REGIONAL AIRPORT

Mt. Washington Regional Airport is located in Whitefield in Coos County, which is in the northern region of the state. All 7, 030 operations are general aviation.

Figure A10-1 – Total Operations Mt. Washington Regional Airport



Source: Chapter 3 NHSASP

Whitefield had 2,247 residents in 2012. Employment in 2012 was 952 with Mountain View Grand hotel, the largest business in town, accounting for almost 20 percent of that employment.

Economic Contribution

As a general aviation airport, Mt. Washington Regional Airport provides many benefits to the community, ranging from emergency preparedness to opportunities for businesses to travel to their customers and suppliers by general aviation, as well as recreational opportunities.

Methodology

A survey was provided to airport management to obtain information about on-site employment, payroll and other expenditures, and use of the airport for business purposes and was returned, at least partially, completed. FAA operations data provided the basis for estimates of visiting air passengers and pilots. Input-output modeling techniques were used to estimate the additional economic activity (or multiplier effect) throughout the state triggered by spending by the airport management, tenants, employees, and visitors based on the data obtained from the surveys. The spending impact is expressed in terms of jobs, labor income and output (or sales revenue), and tax revenues. Cost savings for local businesses

using general aviation for on-the-clock travel were quantified as part of this study.

Findings

On-Airport Employment

The airport is managed by a volunteer manager.

Capital Spending

Airport Improvement Program (AIP) project cost at Mt. Washington Regional Airport averaged \$0.44 million per year between 2010 and 2012. Projects included design and construction of storage building, reconstruction of aircraft parking apron, and environmental assessment in 2010. Taking into account the multiplier effect, the airport's capital expenditures generate an average of seven jobs, \$0.38 million in labor income, \$0.86 million in output and \$0.04 million in tax revenue for the State of New Hampshire.

Operations and Maintenance Spending by Airport Management and Tenants

The airport's operation and maintenance (O&M) spending in 2013 was minimal.

Visitors

General aviation accounted for 100 percent of the operations at Mt. Washington Regional Airport. An estimated 1,327 visitors spent an estimated \$0.15 million on lodging, meals, entertainment transportation, and retail in the State in 2013.²³ Taking into account the multiplier effect, general aviation visitor spending supported two jobs, \$0.07 million in labor income and \$0.23 million in output, at businesses throughout New Hampshire, as well as a minimal amount in business enterprise, business profit, and meals and room tax.

Travel Time Savings

An estimated 402 general aviation business flights, carrying an estimated 1,367 travelers, arrived or departed from Mt. Washington Regional Airport in 2013.²⁴ Businesses using the general aviation airports saved an estimated combined \$0.16 million in 2013.

Summary

²³ Based on the survey conducted as part of this study and on data about similar airports in other New England states, it was assumed that 33 percent of itinerant operations are visiting aircraft, that the average number of visitors per aircraft is 2.0 p, and that the average general aviation visitor spent a total of \$113 per person per trip. More detailed information can be found in Appendix B.

²⁴ Based on the survey conducted as part of this study and on the 2009 General Aviation survey prepared for the National Business Aviation Association and the General Aviation Manufacturers Association, it was assumed that 10 percent of itinerant operations were business travel and that the average number of passengers for these flights was 3.4. More detailed information can be found in Appendix B.

Mt. Washington Regional Airport supported 9 jobs, \$0.55 million in labor income, \$1.11 million in output, and a minimal amount of business enterprise, business profit, and meal and room tax. By providing access to general aviation, Mt. Washington also generated an estimated \$0.16 million in cost savings for local businesses.

Table A10-1 - Overview Economic Contribution Mt. Washington Regional Airport

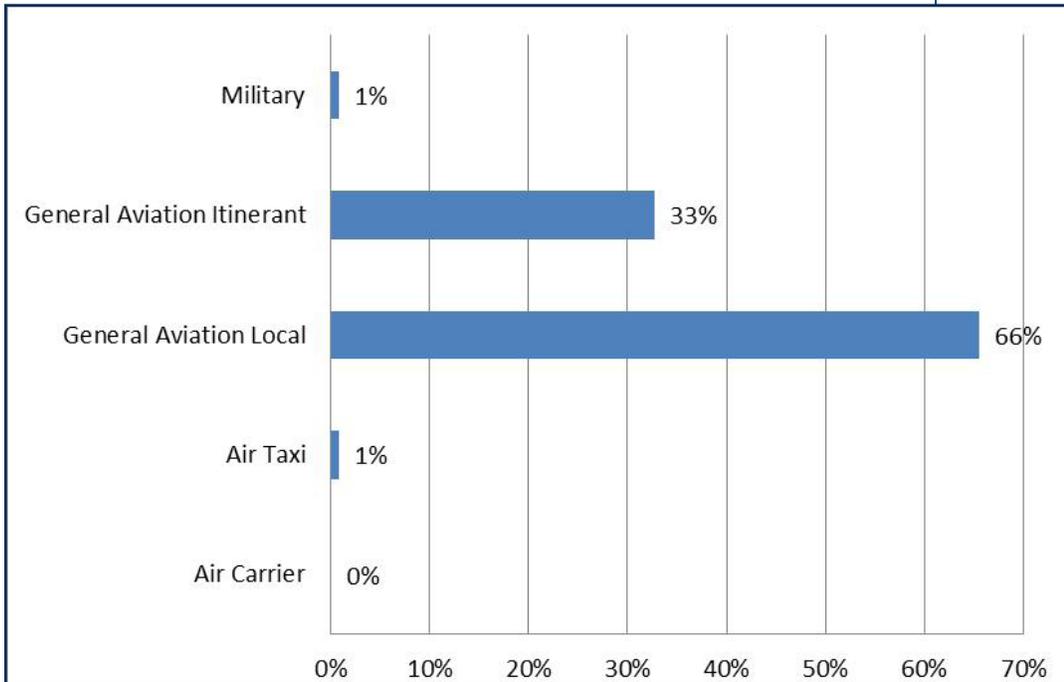
	Jobs	Labor Income (in \$ millions)	Output (in \$ millions)	Tax
On-Airport	-	\$ -	\$ -	\$ -
Capital Spending	7	\$0.38	\$0.86	\$0.00
Operation and Maintenance Spending	0	\$0.01	\$0.02	\$0.00
Visitors Spending	2	\$0.07	\$0.23	\$0.00
Subtotal Spending impact	9	0.46	1.11	0.001
Grand Total	9	0.46	1.11	0.001

Source: Consultant Calculations

A.11. BERLIN REGIONAL AIRPORT

Berlin Regional Airport is a public airport located in the city of Berlin, the only city in Coos County, which is in the northern region of the state. The airport's 12,200 operations in 2013 were almost exclusively general aviation.

Figure A11-1 - Total Operations Berlin Regional Airport



Source: Chapter 3 NHSASP

In 1960 the population of Berlin was 17,821; but, in 2012, the population of Berlin was 9,743. Berlin has experienced a large population decrease over the decades because the paper industry continued to decline and residents left the region. In 2012, the City counted 3,572 employees. Androscoggin Valley Hospital, the City of Berlin School System, and the Berlin Federal Correctional Institution are the largest employers.

Economic Contribution

As a general aviation airport, Berlin Regional Airport provides many benefits to the community, ranging from emergency preparedness to opportunities for businesses to travel to their customers and suppliers by general aviation, as well as recreational opportunities.

Methodology

Surveys were distributed to airport management and airport tenants to obtain information about on-site employment, payroll and other expenditures, and use by the airport for business purposes. Airport management, at least partially, completed the surveys. FAA data provided the basis for estimates of visiting air passengers and pilots. Input-output modeling techniques were used to estimate the additional economic activity (or multiplier effect) throughout the

state triggered by spending by the airport management, tenants,

employees, and visitors based on the data obtained from the surveys. The spending impact is expressed in terms of jobs, labor income and output (or sales revenue), and tax revenues. Cost savings for local businesses using general aviation for on-the-clock travel were quantified as part of this study.

Findings

On-Airport Employment

In 2013 there were an estimated 3 jobs at Berlin Regional Airport. The tenant is an FBO providing flight training, scenic flights, and aircraft repair. Two persons were employed directly by the airport.

Capital Spending

Airport Improvement Program (AIP) project costs at Berlin Regional Airport averaged \$0.13 million per year between 2010 and 2012. Taking into account the multiplier effect, the airport's capital expenditures generate an average of 2 jobs per year, \$0.10 million in labor income, \$0.25 million in output, and a small amount in tax revenue in the State of New Hampshire.

Operations and Maintenance Spending by Airport Management and Tenants

Through the multiplier effect, operation and maintenance (O&M) spending by the airport and its tenant supported an additional 2 jobs in the state.

Visitors

General aviation accounted for 98 percent of the operations at Berlin Regional Airport. An estimated 1,353 visitors spent an estimated total of \$0.15 million on lodging, meals, entertainment transportation, and retail in the State in 2013.²⁵ Taking into account the multiplier effect, general aviation visitor spending supported 2 jobs, \$0.08 million in labor income, and \$0.23 million in output at businesses throughout New Hampshire, as well as \$0.01 million in business enterprise, business profit, and meals and room tax.

Travel Time Savings

An estimated 1,640 general aviation business flights, carrying an estimated 5,440 travelers, arrived or departed from Berlin in 2013.²⁶ Businesses using the general aviation airports saved an estimated combined \$0.66 million in 2013.

Summary

²⁵ Based on the survey conducted as part of this study and on data about similar airports in other New England states, it was assumed that 33 percent of itinerant operations are visiting aircraft, that the average number of visitors per aircraft is 2.0 p, and that the average general aviation visitor spent a total of \$113 per person per trip. More detailed information can be found in Appendix B.

²⁶ Based on the survey conducted as part of this study and on the 2009 General Aviation survey prepared for the National Business Aviation Association and the General Aviation Manufacturers Association, it was assumed that 40 percent of itinerant operations were business travel and that the average number of passengers for these flights was 3.4. More detailed information can be found in Appendix B.

In 2013 Berlin Regional Airport supported an estimated total of 9 jobs, \$0.34 million in labor income, \$1.04 million in output, and \$0.01 million in tax revenue in New Hampshire. By providing access to general aviation, Berlin Regional Airport also generated a total of \$0.66 million in cost savings for local businesses.

Table A11-1 - Overview Economic Contribution Berlin Regional Airport

	Jobs	Labor Income (in \$millions)	Output (in \$ millions)	Tax
On-Airport	3	*	*	\$0.00
Capital Spending	2	\$0.10	\$0.25	\$0.00
Operation and Maintenance Spending	2	*	*	\$0.00
Visitors Spending	2	\$0.08	\$0.23	\$0.01
Grand Total	9	\$0.34	\$1.04	\$0.01

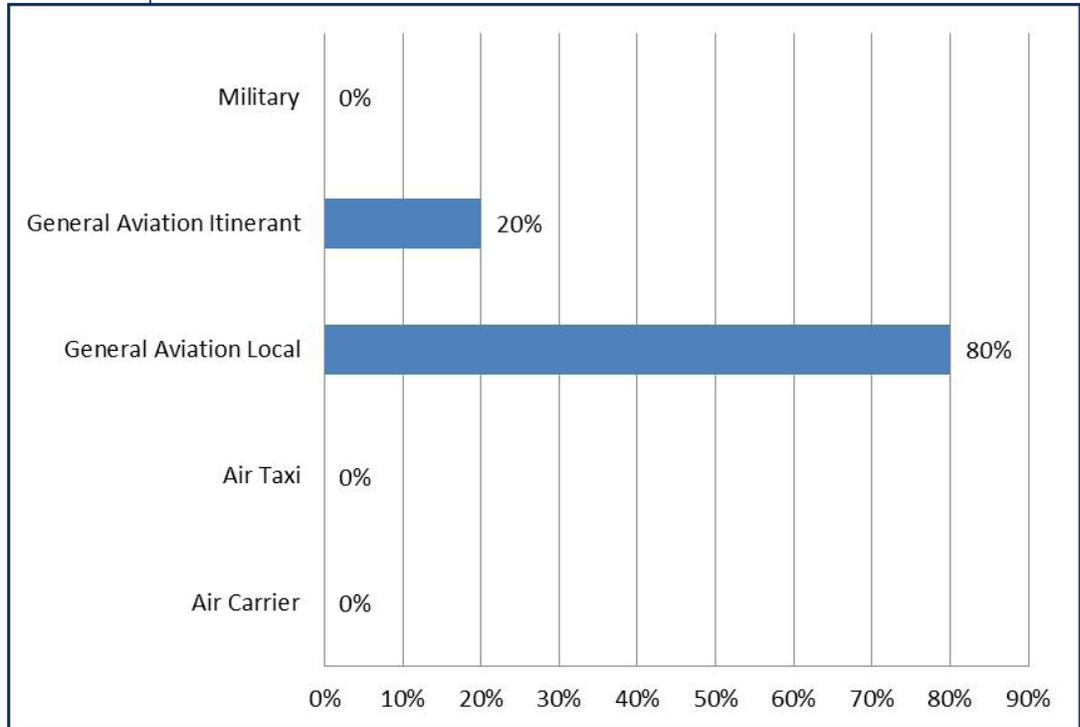
*Not disclosed

Source: Consultant Calculations

A.12. DEAN MEMORIAL AIRPORT

Dean Memorial Airport is a public use airport located in Haverhill, a town in Grafton County. All of the airport's 1,300 operations were general aviation.

Figure A12-1 - Total Operations Dean Memorial Airport



Source: Chapter 3 NHSASP

In 2012 Haverhill's population was 4,654. The number of jobs in that same year was 2,342, with the largest employer being the county.

Haverhill is located on the New Hampshire-Vermont border in the northern region of the state. The northern region had a population of 168,844 in 2012, accounting for 14 percent of the state's total population, and is the least densely populated region of the state. The region's population growth since 1980 has been lower than that of the state as a whole in every decade, with the exception of 2000 to 2010. Projections show the regional growth will continue to be lower than the state average. Employment in the northern region in 2013 was 84,647, which is 14 percent of total state employment. With the White Mountain National Forest as a regional attraction, the northern region of the state is important for tourism and there is proportionally more employment in recreation, entertainment, and accommodation. Ski areas and hotels are among the largest employers in Coos and Carroll counties. The north also has proportionally more jobs in health care because the state's largest hospital is located in Grafton County.

Economic Contribution

As a general aviation airport, Dean Memorial Airport provides many benefits to the community, ranging from emergency preparedness to opportunities for businesses to travel to their customers and suppliers by general aviation, as well as recreational opportunities.

Methodology

A survey was distributed to airport management to obtain information about on-site employment, payroll and other expenditures, and use by airport for business purposes. FAA operations data provided the basis for estimates of visiting air passengers and pilots. Input-output modeling techniques were used to estimate the additional economic activity (or multiplier effect) throughout the state triggered by spending by the airport management, tenants, employees, and visitors based on the data obtained from the surveys. The spending impact is expressed in terms of jobs, labor income and output (or sales revenue), and tax revenues. Cost savings for local businesses using general aviation for on the clock travel were quantified as part of this study.

Findings

On-Airport Employment

In 2013 there was one person employed at Dean Memorial Airport. The airport does not have any tenants.

Capital Spending

Airport Improvement Program (AIP) project costs at Dean Memorial Airport averaged \$0.01 million per year between 2010 and 2012 based on one obstruction analysis and property acquisition feasibility study in 2011 and no projects in the two other years. The economic impact of this project is minimal.

Operations and Maintenance Spending by Airport Management and Tenants

Operations and maintenance (O&M) expenditures by airport management supported one additional job in New Hampshire.

Visitors

General aviation accounted for 100 percent of the operations at Dean Memorial Airport. An estimated 73 visitors spent an estimated of \$0.01 million on lodging, meals, entertainment transportation, and retail in the State in 2013.²⁷

Travel Time Savings

An estimated 3 general aviation business flights, carrying an estimated 9 travelers, arrived or departed from Dean Memorial in 2013.²⁸ Businesses using the general aviation airports experienced travel time savings.

²⁷ Based on the survey conducted as part of this study and on data about similar airports in other New England states, it was assumed that 33 percent of itinerant operations are visiting aircraft, that the average number of visitors per aircraft is 1.7 p, and that the average general aviation visitor spent a total of \$77 per person per trip. More detailed information can be found in Appendix B.

²⁸ Based on the survey conducted as part of this study and on the 2009 General Aviation survey prepared for the National Business Aviation Association and the General Aviation Manufacturers Association, it was assumed that 1 percent of itinerant operations were business travel and that the average number of passengers for these flights was 3.4. More detailed information can be found in Appendix B.

Summary

In 2013 Dean Memorial Airport supported an estimated 2 jobs, \$0.04 million in labor income, \$0.13 million in output, and a small amount business enterprise, business profit, and meal and room tax.

Table A12-1 - Overview Economic Contribution Dean Memorial Airport

	Jobs	Labor Income (in \$ millions)	Output (in \$ millions)	Tax
On-Airport	*	*	*	\$0.00
Capital Spending	0	\$0.01	\$0.03	\$0.00
Operation and Maintenance Spending	*	*	*	\$0.00
Visitors Spending	0	\$0.00	\$0.01	\$0.00
Grand Total	2	\$0.04	\$0.13	\$0.00

*Not disclosed

Source: Consultant Calculations