

5. ECONOMIC MODELING – METHODOLOGY AND FINDINGS

GENERAL METHODOLOGY

The study used a series of analysis steps to calculate the *total economic impact* of Vermont airports on local and state economies, which consists of the *primary impact* and the *spin-off impact*.

Primary impact – The primary impact has two components: the *on-airport primary impact* and the *off-airport primary impact*.

- The *on-airport primary impact* includes the jobs and income that are generated by aviation activity, and by businesses and government agencies located on airport property. Prominent examples are airlines, air taxi services, fixed-base operators, and other businesses such as restaurants located within airport terminals.
- The *off-airport primary impact* is the total of all business activity that does not take place on airport property, but that nevertheless supports and/or depends on local airport service. Examples are off-airport restaurants and hotels that serve visitors arriving in the State by air, and businesses that use aviation services, relying on cargo shipment or transport of personnel.

Spin-off impact – The spin-off impact is best understood as the respending of the dollars brought into the State through the primary impact. The businesses and their employees that receive the dollars of the primary impact, in turn, buy products and services from others. Their employees spend wages on food, housing, recreation, *et cetera*.

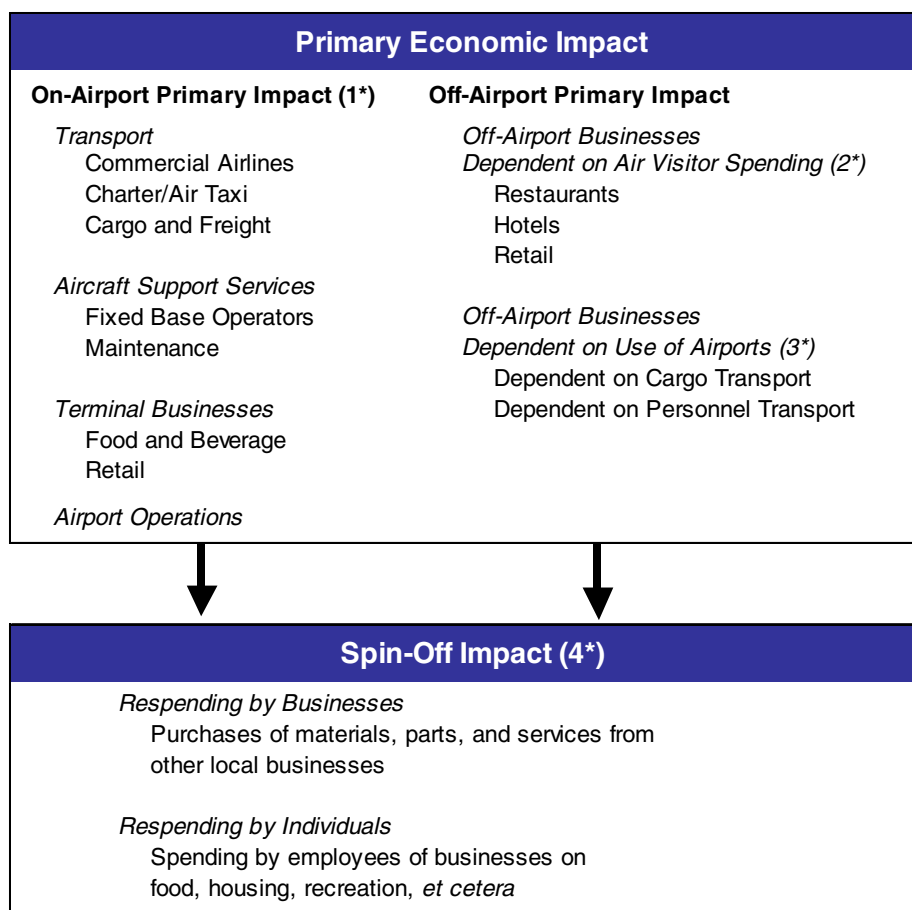
These rounds of respending create the spin-off impact, also sometimes called the “multiplier effect,” because a multiplier is used to describe its relative size. For example, a multiplier of 2.4 means that the total impact of one new dollar of economic stimulation will be \$2.40. One dollar represents the primary impact, and \$1.40 comprises the spin-off impact.

Calculating appropriate multipliers is a complex process; multipliers naturally differ among industries and among regions. Thus, computer modeling was used to develop a separate set of multipliers for each airport's local area and calculate the spin-off impact of that airport on the local economy.

Total impact - The total impact is the sum of the primary and spin-off impacts, and represents the full economic benefit that an airport provides to its community.

There are four steps that were covered in the airport impact model, which correspond to these same measurement concepts and follow the elements in the chart that follows.

**Exhibit 6
Summary of Airport Economic Impact Accounting**



Airport Total Economic Impact = Primary + Spin-off Impact

* Numbers reflect the steps described in the text below

SPECIFIC ANALYSIS STEPS

Step 1: Calculate On-Airport Economic Activity

The surveys of airport managers and tenants were used to provide an inventory of economic activity occurring at the airport. This activity encompassed public and private enterprises involved in operating the airports, as well as businesses providing aviation support services, retail sales to passengers in the terminal, and air freight services.

Establishments were asked to provide information about employment, payroll, and economic output (equal to either business sales or public sector expenditure, depending on whether the enterprise was private or public). For the few cases where the airport tenants did not provide full information, the Study relied on Dun & Bradstreet business records for job counts, and on local industry averages from the U.S. Bureau of Economic Analysis for wages and sales per employee to approximate payroll and business sales.

Step 2: Calculate Off-Airport Activity Dependent on Airport Visitor Spending

The surveys of air passengers were used to derive an average profile of local visitor spending on lodging, food and beverages, entertainment, retail purchases, and miscellaneous activities such as car rental and personal or business services. When meeting passengers at the airport to survey them, the Study team carefully distinguished out-of-staters coming in to visit, from local residents returning via air. This distinction is important since it is the out-of-state visitors who are bringing in new money to the State and comprising the primary economic impact.

To calculate the total amount of money flowing into local communities, first the number of air visitors to the State coming through each airport was determined. To calculate commercial airline visitors, the known number of arriving airline passengers was multiplied by the percentage that are from out of state. General aviation visitors were likewise calculated by multiplying the number of arriving passengers by the percentage who are visiting from out-of-state, as determined in the airport visitor surveying process. The number of visitors was then multiplied by the average visitor spending per person, as

determined in the survey, to arrive at total visitor spending. This figure represents the total amount of money coming into local communities from visiting air travelers.

The basis of the number of commercial air visitors used in this Study is the US Department of Transportation's Origin and Destination Ticket Survey. General aviation passenger totals are based on counts of general aviation itinerant operations from airport managers. Though the GA passenger numbers are estimates, they are based on the best available data for Vermont's public-use airports at present.

To estimate the number of GA visitors to Vermont each year, an average passenger count of 1.9 per itinerant aircraft arrival (including the pilot) was assumed. This ratio is based on past empirical studies, and was supported in the findings of the Study's survey efforts.

Lastly, it was assumed that 45 percent of arriving general aviation passengers were out-of-state visitors (for commercial airline passengers, the percentage is known through US DOT statistics). This estimate is based on consultations that the project team had with faculty at the School of Natural Resources of the University of Vermont and staff associated with the Vermont Tourism Data Center, as well as the visitor-to-resident ratio that the Study team encountered when visiting and conducting surveys at Vermont general aviation airports.

The study made a further adjustment to subtract the food and retail spending by visitors within air terminals, since these expenditures were already counted in step #1. Survey results indicated that nearly all of these out-of-state air visitors utilized air transport because it was most convenient mode for them, and would significantly curtail their travel to their destinations if air transport were not an option.

Step 3: Calculate Off-Airport Businesses Dependent on Use of Airports

The Study team designed surveys for other off-airport businesses that, while not recipients of air visitor expenditure (and thus not included in step #2), depend on airports due to reliance on aviation services, such as transport of

cargo or personnel. Surveys were sent to all Vermont-domiciled businesses listed as owning their own aircraft in the FAA Civil Aircraft Registry. In addition, over two thousand other Vermont service-sector and manufacturing businesses that do not own aircraft also received surveys.

The respondents identified the nature of business functions that depend on local airport service, as well as their estimate of the percentage by which their business activity (jobs and sales) would contract if the local airport were unavailable.

The results were tabulated to identify the pro-rated portion of employment and sales that depend on the local airport. This figure is the air-dependent portion of business sales. For the sake of conservatism, the study only counted this dependence for businesses that specifically reported how and why some of their activity could not occur without local airport service.

Survey results were *not* extrapolated to other businesses that did not return a survey; for conservatism, a business that did not return a survey was assumed not to be airport-dependent. The results were further adjusted to take out spending at the airport (accounted in step #1) and visiting customer or employee spending (accounted in step #2). The final figure represents the off-airport business activity dependent on use of airports displayed in the chart in Exhibit 6.

As Exhibit 6 shows, the economic impacts accounted in steps 1, 2, and 3 represent the primary economic impact of Vermont public-use airports.

Step 4: Calculate the Spin-Off Economic Impact

The final step was to develop and apply an economic model of the local and state economies to calculate the spin-off economic impact, which results from the primary economic impact compiled in step #'s 1, 2, and 3. As Exhibit 6 specified, the spin-off impact represents:

- Responding by businesses of the dollars received through the primary impact on local procurement of materials, supplies, and services, and

- Respending by the employees of these businesses on food, housing, recreation, and other consumer spending categories.

The IMPLAN modeling system was used to develop separate economic impact models for each county in Vermont, so that airports' local spin-off impact could be determined. In addition, a model was developed for the State as a whole. This is a form of "input-output" economic model, which traces how industries and workers purchase goods and services from other types of businesses and the extent to which these purchases remain within the same county or state.

It is important to note that the magnitude of these spin-offs will differ depending on whether it is measured as a local impact or as a statewide impact. In general, spin-off impacts are larger at the state level, since some of the respending by individuals and businesses occurs outside the local area, but within the State. Conversely, the statewide impact is reduced to the extent that some general aviation visitor spending comes from residents of other parts of Vermont. In these cases, which represent a small share of total air visitors, intra-state air travelers bring in new dollars to the local community but not to the state economy.

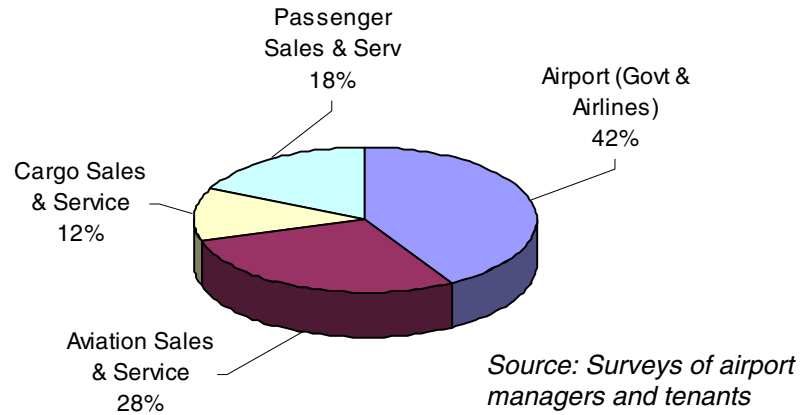
FINDINGS

On-Airport Economic Activity (Results of Step 1)

The surveys of airport managers and tenants covered 16 airports (Robin's Nest is reported closed by the owner), with a total of 904 employees, generating a payroll in excess of \$33 million and total economic output of roughly \$70 million. This airport activity is supported by airlines, corporate aircraft and personal aircraft travel, and of the 904 primary, on-airport jobs, nearly 60 percent of them are attributable to private-sector businesses, as seen in Exhibit 7.

Exhibit 7

Nearly 60% of Primary, On-Airport Jobs Are in the Private Sector

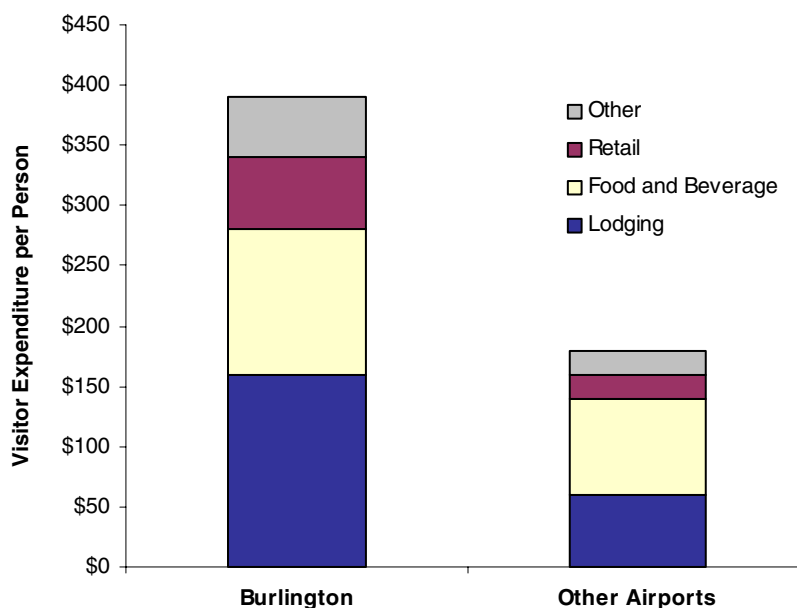


Off-Airport Activity Dependent on Airport Visitor Spending (Results of Step 2)

According to the U.S. Department of Transportation, Vermont's two commercial airports served 1,060,792 passengers in 2001. According to calculations derived from the Study's survey results, the general aviation facilities at GA (general aviation) and commercial service airports served 628,234 general aviation passengers. These numbers are split evenly among arriving and departing trips, and surveys show that roughly 45 percent of arriving passengers come from outside of Vermont and stay overnight in commercial lodging.

Based on averages derived from the visitor spending surveys, spending by the visitors varies by airport, but overall averages roughly \$389 per trip for outside visitors to Burlington and \$182 per trip for visits to elsewhere in Vermont, as shown in Exhibit 8. This supports a total of over \$107 million in sales for lodging, meals, retail sales, entertainment and other local businesses.

Exhibit 8
Per-Person Average Expenditures of Vermont Air Visitors



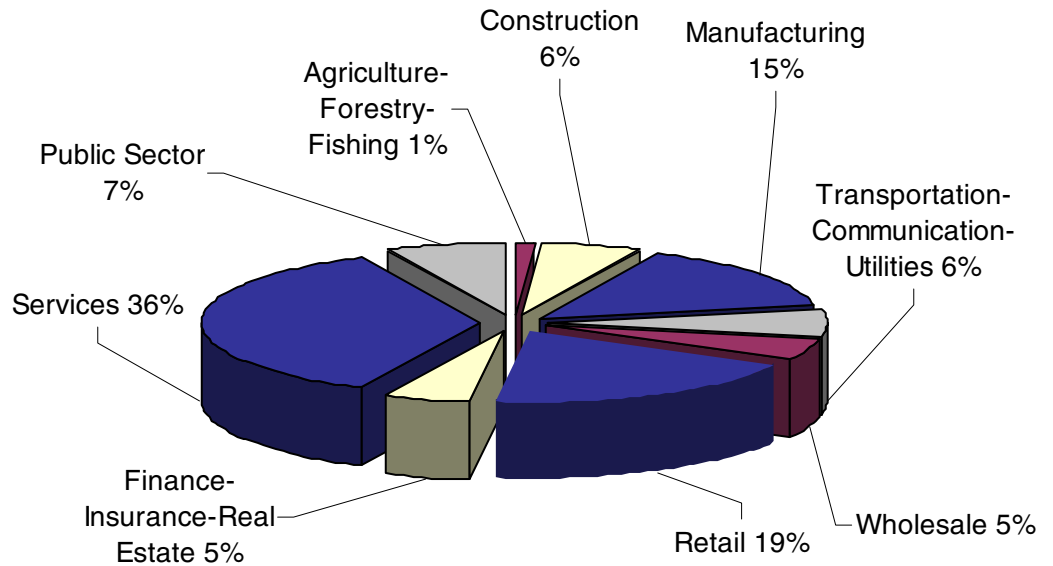
Source: Airport Visitor Spending Survey

Off-Airport Economic Activity – Businesses Dependent on Use of Airports (Results of Step 3)

A wide range of Vermont firms depend on Vermont’s airports for freight delivery, as well as for transport of principals, employees, and customers. This includes both businesses that own their own aircraft, and those that rely on commercial, charter and air taxi services.

The Study surveyed over 600 aircraft owners and over 2,000 other establishments in Vermont to assess the dependence of their business activities on Vermont’s public-use airports. Survey results indicate that a diverse group of industries rely on Vermont’s public-use airport system; not surprisingly, as shown in Exhibit 9, over half are in the service industry.

Exhibit 9
Of the Businesses That Responded to the Airport-Dependent Business Survey,
Over Half are in the Service Industry



Source: Survey of businesses

Spin-Off Economic Impacts (Results of Step 4)

The IMPLAN models for each Vermont county, as well as for the state as a whole, indicate that there are significant spin-off impacts resulting from the respending of dollars brought into Vermont by aviation, aviation-supporting, and aviation-dependent business activity.

Appendix III contains the multipliers used in this Study, as determined by IMPLAN. The multipliers for each local economy, as well as for the Statewide economy, can be found there.

Total Statewide and Local Impacts

The total statewide economic impact of Vermont public-use airports represents more than 9,500 jobs, \$225 million in wages, and \$611 million in business sales.

The exhibits that follow break down this total impact according to its component parts.

- Exhibits 10A-C focus on the *on-airport activity* as described in Step 1.
- Exhibit 11A shows the *off-airport visitor spending activity* discussed in Step 2.
- 11B displays the value of *off-airport business activity that is dependent on aviation services*, which Step 3 addressed.
- Finally, the total value of the *spin-off impact*, defined in Step 4, is spread over all of the exhibits.
- Exhibits 12A and 12B reassemble the components of the *total economic impact* so that the reader can see how they fit together.

In Exhibits 10A, 10B, 10C, 11A, and 11B, the spin-off impact specified is the *statewide* spin-off impact, that is, the spin-off impact that occurs within the State of Vermont as a whole. The *local* spin-off impact, which occurs within the airport's community, is somewhat smaller than the statewide spin-off impact: as spin-off economic activity occurs, a certain percentage of each round of respending is spent outside of the airport's local economy, and so ceases to contribute to the local spin-off impact, yet still remains within the larger State economy. Because the State economy is larger than local economies and captures a greater percentage of each round of respending, the statewide spin-off impact is larger than the local spin-off impact.

Both impact measures are relevant in different contexts, for example, someone interested in the contribution of the whole airport system to the State economy should consider the statewide spin-off impact most relevant,

while someone else examining the impact of a single airport on a community would be most concerned with the local spin-off impact. Once again, exhibits 10A through 11B refer to statewide spin-off impacts, while exhibits 12A and 12B, as well as the exhibits in the individual airport profile chapter, show both local and statewide spin-off impacts in columns clearly labeled as such.

Exhibit 10A – On-airport Employment Exhibit 10A examines on-airport employment – jobs generated by the operation of the airport and its tenants, including airport operation and maintenance staff, government agencies, concessions, restaurants, rental car companies, FBO's, *et cetera*.

For Vermont's smallest airports, on-airport employees may on first glance appear overstated. However, included in these numbers is an allocation of maintenance staff employed by the State to mow, plow and maintain the ten state-owned airports. For purposes of this Study, if state employees were assigned to maintain a state-owned airport, the airport's employment could not be less than one. In addition, state employees assigned to manage the state-owned airports were counted as on-airport employees where appropriate.

The first column of Exhibit 10A, "On-Airport Employment," lists the actual employment of the airport and on-airport businesses. These figures were determined through the Study's survey process, as well as the State's management and maintenance regime at the airports that it directly owns.

The wages from these jobs go straight into the pockets of employees, and are respent in consecutive rounds in local communities, generating a spin-off impact greater than the original payroll amount. This spin-off impact, measured in dollars, can be translated into full-time equivalent positions using the average wage rates given by the IMPLAN model for individual communities. The number of spin-off full time equivalent positions is shown in the second column, "Spin-off Employment Impact."

Exhibit 10A
Summary Statewide – On-Airport Employment

Airport	On-Airport Employment	Spin-off Employment Impact	Total Employment Impact
Basin Harbor	*	*	*
John H. Boylan	1	1	2
Burlington International	751	447	1,198
Caledonia County	2	1	3
Fair Haven	1	1	2
Franklin County	14	9	23
Hartness	5	3	8
Edward F. Knapp	20	8	28
Middlebury	15	10	25
Morrisville-Stowe	9	6	15
William H. Morse	56	37	93
Mt. Snow	6	4	10
Newport	2	1	3
Post Mills	2	1	3
Rutland	21	14	35
Warren-Sugarbush	3	2	5
Total:	908	545	1,453

*Note: Basin Harbor Airport is a turf field located within the Basin Harbor Club, a golf/resort complex; management was unable to ascribe an employment figure to the airport by itself

Exhibit 10B – On-airport Payroll Exhibit 10B below shows the on-airport payroll associated with this employment, as well as its spin-off effects. The majority of these payroll figures come from the Study’s survey results. In a few cases (such as the Town of Fair Haven), there was not a specific budget devoted to airport management and maintenance. For these cases, the airport sponsor provided an approximate number of person-hours devoted to the airport, which was converted to payroll through application of ratios provided by the IMPLAN model. In other cases (such as that of Island Pond), the Study team was provided with a district maintenance expense budget by VTrans and likewise determined payroll as a portion of total expenses through application of IMPLAN-provided ratios.

Payroll spin-off is shown in the second column. Once again, the payroll spin-off represents the added economic impact as the wages received by those employed on airport property are respent in the local community. The size of the spin-off impact was determined for each local economy by the IMPLAN model.

Exhibit 10B
Summary Statewide – On-Airport Payroll

Airport	On-Airport Payroll	Spin-off Payroll	Total Payroll
Basin Harbor	*	*	*
John H. Boylan	\$9,311	\$4,143	\$13,454
Burlington International	\$28,653,524	\$11,398,840	\$40,052,364
Caledonia County	\$50,263	\$22,073	\$72,336
Fair Haven	\$35,537	\$15,521	\$51,058
Franklin County	\$257,548	\$112,641	\$370,189
Hartness	\$152,123	\$66,645	\$218,768
Edward F. Knapp	\$322,285	\$164,511	\$486,796
Middlebury	\$205,199	\$89,690	\$294,889
Morrisville-Stowe	\$167,817	\$73,531	\$241,348
William H. Morse	\$1,639,285	\$716,186	\$2,355,471
Mt. Snow	\$150,000	\$65,513	\$215,513
Newport	\$25,728	\$11,315	\$37,043
Post Mills	\$73,394	\$32,055	\$105,449
Rutland	\$802,668	\$351,252	\$1,153,920
Warren-Sugarbush	\$132,498	\$57,869	\$190,367
Total:	\$32,677,180	\$13,181,785	\$45,858,965

*Note: Basin Harbor Airport is a turf field located within the Basin Harbor Club, a golf/resort complex; management was unable to ascribe a payroll figure to the airport by itself

Exhibit 10C – Total On-Airport Economic Output Exhibit 10C shows the total economic value of the on-airport activities occurring at each facility, termed the Total On-Airport Economic Output. Once again, this figure represents the total value of on-airport activity. This activity includes the total revenues of businesses located on airport property, as well as state or local government expenditures for management and maintenance, where made.

These figures represent the revenues of on-airport businesses as determined through the Study's survey efforts, plus State expenditure figures provided by VTrans. The spin-off impact in the second column represents the respending of these dollars in local communities.

Exhibit 10C
Summary Statewide – Total On-Airport Economic Output:
On-Airport Business Sales and Public Sector Expenditures

Airport	On-Airport Output: Business Sales and Public-Sector Expenditure	Spin-off Airport Output Impact	Total Airport Output Impact
Basin Harbor	*	*	*
John H. Boylan	\$17,500	\$11,644	\$29,144
Burlington International	\$53,638,122	\$26,928,659	\$80,566,781
Caledonia County	\$109,504	\$56,723	\$166,227
Fair Haven	\$83,334	\$39,148	\$122,482
Franklin County	\$845,144	\$403,867	\$1,249,011
Hartness	\$434,658	\$212,990	\$647,648
Edward F. Knapp	\$1,055,333	\$608,481	\$1,663,814
Middlebury	\$2,015,000	\$949,515	\$2,964,515
Morrisville-Stowe	\$442,667	\$218,252	\$660,919
William H. Morse	\$6,801,825	\$3,205,053	\$10,006,878
Mt. Snow	\$214,286	\$1,315,348	\$1,529,634
Newport	\$117,500	\$58,621	\$176,121
Post Mills	\$180,438	\$84,764	\$265,202
Rutland	\$3,507,119	\$1,676,870	\$5,183,989
Warren-Sugarbush	\$200,000	\$93,953	\$293,953
Total:	\$69,662,430	\$35,863,888	\$105,526,318

*Note: Basin Harbor Airport is a turf field located within the Basin Harbor Club, a golf/resort complex; management was unable to ascribe a sales figure to the airport by itself

Exhibit 11A – Off-Airport Visitor Expenditures Exhibit 11A reports the off-airport visitor expenditure impact of each airport on its local region. These figures represent spending by out-of-state visitors on lodging, food, entertainment, local transport, and a range of other expenditure categories. The totals were determined by multiplying the number of air visitors to the State by their average expenditures, as determined in the survey process.

In the table below, ‘business sales’ reports the total income of businesses from serving visitors arriving by air. The ‘payroll’ column shows the amount of this income that these businesses pay to their employees, and demonstrates that a significant part of the total business income goes right into the pockets of Vermonters. As shown, visitors to Vermont arriving by way of the airport system contributed over \$107 million to the state economy in 2001, over \$40 million of which was taken home in paychecks.

The associated spin-off effects were also considerable: an additional \$63 million in business sales was generated through the multiplier effect, which included nearly \$23 million in wages .

Exhibit 11A
Summary Statewide – Impact of Off-Airport Visitor Expenditures

Airport	Payroll	Payroll Spinoff	Business Sales	Business Sales Spinoff
Basin Harbor	\$272,273	\$102,488	\$387,869	\$141,686
John H. Boylan	\$5,954	\$3,348	\$15,513	\$9,301
Burlington International	\$38,264,373	\$21,731,558	\$101,942,039	\$60,047,466
Caledonia County	\$30,073	\$12,850	\$81,444	\$35,885
Fair Haven	\$29,693	\$16,694	\$77,566	\$46,504
Franklin County	\$83,974	\$47,185	\$224,940	\$134,861
Hartness	\$81,326	\$46,709	\$209,427	\$125,560
Edward F. Knapp	\$415,136	\$233,398	\$1,085,918	\$651,052
Middlebury	\$236,688	\$136,544	\$649,938	\$375,248
Morrisville-Stowe	\$97,582	\$55,055	\$248,210	\$148,812
William H. Morse	\$267,303	\$150,294	\$698,090	\$418,533
Mt. Snow	\$25,925	\$14,588	\$66,706	\$39,993
Newport	\$43,175	\$24,327	\$113,246	\$67,895
Post Mills	\$59,345	\$33,437	\$155,131	\$93,007
Rutland	\$516,067	\$290,147	\$1,348,090	\$808,234
Warren-Sugarbush	\$5,931	\$3,334	\$15,513	\$9,301
Total:	\$40,434,818	\$22,901,956	\$107,319,640	\$63,153,338

Exhibit 11B – Off-Airport Business Activity Dependent on Use of Airports Exhibit 11B below reports the value of business activity by Vermont firms that depends directly on aviation (and thus airports) for transport purposes, both cargo and personnel transport. The figures come from the Study's airport-dependent business survey for off-airport businesses, in which establishments were asked to judge the amount of their business activity that depends on the availability of aviation services. Due to its conservative nature, this Study reports results only from businesses that returned the survey; no inferences were made about firms who did not answer the survey, and they were effectively considered to be non-airport-dependent.

The survey response rate varied widely among the different regions of the State. Some larger facilities had no off-airport businesses reporting dependence on use of them, while some smaller facilities had several, leading to results that at first appear counter-intuitive. Once again, the results are an artifact of differing survey response rates among the regions of the State, but are perfectly in keeping with the goal of this document: because it is conservative in nature, while there may be some level of economic impact that this Study failed to document, the team is confident in asserting that the economic impact of Vermont airports is *at least* as great as reported. The airport-dependence of Vermont off-airport businesses that use aviation services is at least as great as reported in the Exhibit 11B below.

As the exhibit shows, Vermont businesses reported that their airport-dependent activity equals nearly \$182 million in revenues, of which almost \$62 million goes directly into the paychecks of Vermonters. The spin-off impact is also large: nearly \$154 million in business sales are generated in subsequent rounds of respending by businesses and their workers, of which over \$54 million is paid directly to workers.

Exhibit 11B

Summary Statewide – Dependence of Off-Airport Businesses on Aviation Services

Airport	Payroll	Payroll Spinoff	Business Sales	Business Sales Spinoff
Basin Harbor	\$0	\$0	\$0	0
John H. Boylan	\$0	\$0	\$0	\$0
Burlington International	\$52,235,781	\$45,124,877	\$146,053,135	\$125,726,608
Caledonia County	\$418,914	\$464,332	\$3,622,500	\$3,490,681
Fair Haven	\$0	\$0	\$0	\$0
Franklin County	\$0	\$0	\$0	\$0
Hartness	\$43,553	\$46,658	\$172,900	\$136,189
Edward F. Knapp	\$1,138,754	\$1,287,670	\$5,645,000	\$4,517,653
Middlebury	\$2,157,164	\$2,422,931	\$9,804,750	\$7,616,758
Morrisville-Stowe	\$1,611,871	\$1,805,953	\$6,291,875	\$4,882,070
William H. Morse	\$87,500	\$76,098	\$130,335	\$123,464
Mt. Snow	\$3,587	\$2,550	\$7,500	\$7,045
Newport	\$0	\$0	\$0	\$0
Post Mills	\$732,600	\$425,587	\$1,610,000	\$1,122,547
Rutland	\$3,366,765	\$2,498,757	\$8,223,674	\$5,921,736
Warren-Sugarbush	\$122,843	\$87,342	\$175,000	\$164,378
Total:	\$61,919,332	\$54,242,755	\$181,736,669	\$153,709,129

Exhibit 12A – Total Economic Impact of Vermont Airports Exhibit 12A below presents the total of on-airport and off-airport impacts for Vermont's public-use airports. Because the survey response rate of off-airport businesses (11B) varied dramatically among the different regions of the state, the economic impact of off-airport businesses that depend on airports through use of aviation services is consolidated at the bottom of the chart. The figures are presented in this manner to make the comparison among the airports easier by separating out the effects of different survey response rates among the local business communities.

There are two columns in Exhibit 12A: local economic impact, and statewide economic impact, which reflect the different multipliers used in determining the spin-off impact on local economies and on the State economy. The local column shows the economic impact that the airports have on their individual local economies. Because the State economy is larger, it captures a larger portion of each round of dollar respending, so the spin-off impact (and thus the total impact) of each airport on the State economy is larger than on the local economy.

Exhibit 12A
Summary Total Statewide Economic Impacts by Airport

Airport	Total Local Economic Impact	Total Statewide Economic Impact
Basin Harbor	\$529,555	\$620,412
John H. Boylan	\$42,101	\$53,958
Burlington International	\$239,579,040	\$242,556,282
Caledonia County	\$272,829	\$296,500
Fair Haven	\$229,513	\$246,551
Franklin County	\$1,416,791	\$1,608,812
Hartness	\$903,809	\$982,630
Edward F. Knapp	\$3,244,452	\$3,400,784
Middlebury	\$3,515,928	\$3,989,700
Morrisville-Stowe	\$887,312	\$1,057,941
William H. Morse	\$10,204,911	\$11,123,502
Mt. Snow	\$1,340,492	\$1,636,333
Newport	\$292,928	\$357,262
Post Mills	\$415,439	\$513,340
Rutland	\$6,845,295	\$7,554,398
Warren-Sugarbush	\$305,987	\$318,767
Subtotal:	\$270,026,382	\$276,317,172
Off-Airport Businesses		
Dependent on Use of Airports:	\$328,066,089	\$335,445,798
Total Economic Impact of Vermont's Public-Use Airports:	\$598,092,471	\$611,762,969

Exhibit 12B - Total Economic Impact of Vermont Airports (detailed) A more detailed synopsis of the statewide total economic impact is presented in Exhibit 12B below. The exhibit is presented in the same format as the tables in Section 6, which detail the Study's results for each individual Vermont public-use airport.

Exhibit 12B

Summary Total Statewide Economic Impacts by Impact Category

Airport Report:		State Total	
Aircraft Operations (take-offs and landings)		Airport Passengers	
Commercial	44,099	Commercial	1,060,793
Itinerant General Aviation	143,687	General Aviation	276,290
Military	16,286		
Total	204,072	Total	1,337,083
			Total Output: Business Sales and Public Sector Expenditure
Economic Impact Category	Employment	Payroll (Wages)	
On-Airport Primary Impact (1*)			
Airport Management and Airlines	385	17,065,358	24,712,417
On-Airport Passenger Service	162	3,432,387	10,253,320
On-Airport Freight Service	104	3,435,935	10,368,739
Other Aviation Services	258	8,743,500	24,327,954
<i>Subtotal:</i>	<i>909</i>	<i>32,677,180</i>	<i>69,662,430</i>
Off Airport Primary Impact			
Off-Airport Visitor Spending (2*)	3,261	40,434,818	107,319,640
Off-Airport Aviation-Dependent Business Activity (3*)	1,827	61,919,332	181,736,669
<i>Subtotal:</i>	<i>5,088</i>	<i>102,354,150</i>	<i>289,056,309</i>
Spin-Off Effects (4*) of Airports:			
<i>On Local Economies</i>	<i>3,010</i>	<i>84,533,496</i>	<i>239,373,732</i>
<i>On Statewide Economy</i>	<i>3,534</i>	<i>90,392,145</i>	<i>253,044,232</i>
Vermont Airports Total Economic Impact			
On Own Local Economies Only	9,007	219,564,825	598,092,471
On Statewide Economy	9,531	225,423,475	611,762,971

* Numbers refer to steps detailed in Section 5: Methodology and Findings

Vermont airports were responsible for nearly \$612 million in business sales in the State economy during the Study year of 2001. Of these total revenues, over \$225 million went directly into Vermonters' pockets in wages and salaries, and supported 9,531 full-time positions in the State. The following section examines the contribution made by each Vermont public-use airport to this impressive total figure.

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