

Review of Norwood Memorial Airport Revenue and Expense Trends October 2017

At the request of the Finance Commission and Budget Balancing Committee, an analysis of Norwood Memorial Airport revenues and expenses was conducted in July and August. The intent of the analysis was to determine if there were opportunities for airport operations to be more financially self-sustaining, that is, become less dependent on tax revenues as a source of funding for airport operations.

Resources used to obtain the information needed for this report included:

- Meeting with Airport Manager Russ Maguire and Airport Commission Chairman Mark Ryan with Finance Commissioner Robert Donnelly and Board of Selectmen Chairman William Plasko and several follow-up conversations for more information and clarification;
- Review of an initial analysis of the financial structure of the Airport by former Finance Commissioner Joe Greeley (and subsequent recommendation to conduct a “net earnings” exercise);
- Actual Revenue and Expense history from FY2013 through FY2017 provided by Town Accountant Tom McQuaid;
- Study conducted by the Personnel Board in 2015 identifying eight (8) public use airports most comparable to Norwood Memorial Airport;
- Airport Master Plan Update (March 2007)
- Benefit cost estimates, airport insurance costs and legal/litigation costs associated with the Airport provided by Town departments;
- Review of budget and expense detail from other public use airports (e.g., Mansfield, Plymouth, Beverly);
- Massachusetts Statewide Airport Economic Impact Study Update.

The report is divided into four sections:

SECTION 1: FY13 TO FY17 HISTORY OF AIRPORT REVENUES, EXPENSES AND NET EARNINGS

SECTION 2: REVIEW OF AIRPORT REVENUE SOURCES AND EXPENSES

SECTION 3: SUMMARY AND RECOMMENDATIONS

SECTION 4: ECONOMIC IMPACT

Five attachments are included and described in the report.

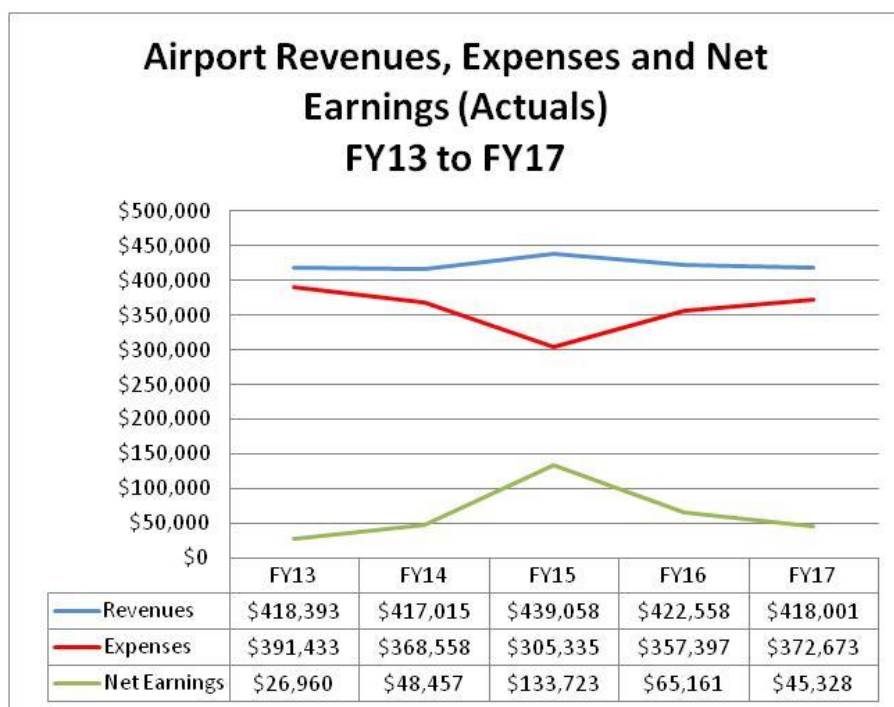
SECTION 1: FY13 TO FY17 HISTORY OF AIRPORT REVENUES, EXPENSES AND NET EARNINGS

The report contains three attachments detailing actual expense, revenue and “net earnings” history from FY13 to FY17. The first (Attachment A) is Tom McQuaid’s history of actual revenue, expense and surpluses/deficits for this five-year period.

The second attachment (Attachment B) includes the adjustments noted by Commissioner Greeley in his report from March 2017. Specifically, for identifying what factors are contributing to our net earnings trends, I have “zeroed” out expenses associated with snow removal and the Town’s share of grants from DOT and FAA and revenues from FEMA reimbursements. By doing this, as suggested by Commissioner Greeley, we are able to focus the review on those expenses and revenues that are directly under the control of the Airport.

The third attachment (Attachment C) combines all revenues and costs from Attachments A with the addition of “other town services” costs as suggested by Commissioner Greeley to provide a look at net earnings history when these costs are added into the mix.

The below chart depicts the actual revenue, expense and net earnings history as summarized in Attachment A- “Actuals”.

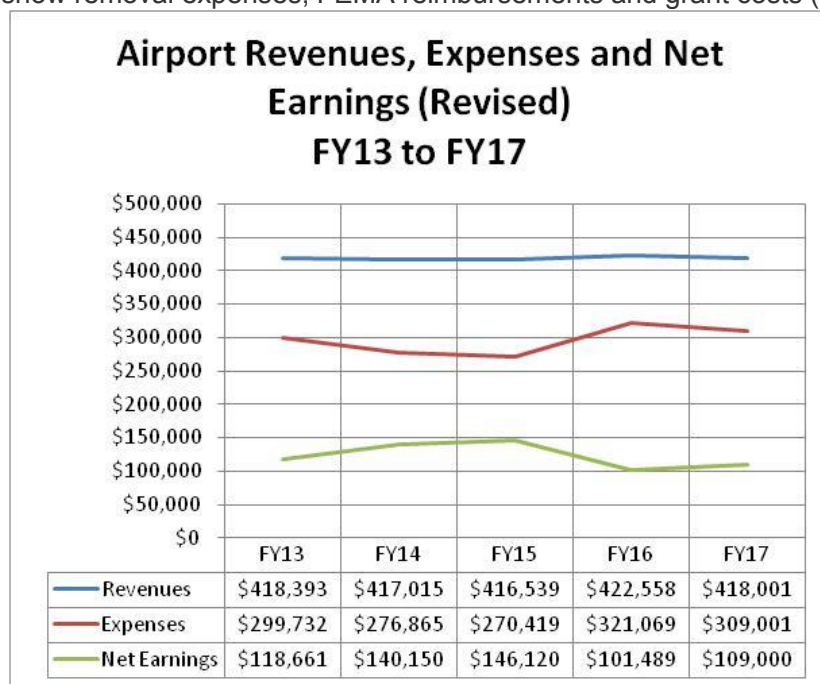


Net earnings during this period fluctuate significantly this period ranging from a low of \$26,960 in FY13 to a high of \$133,723 in FY15. The five-year total for net earnings was \$319,629 or average net earnings of \$63,926 per year.

Since net earnings are a calculation of actual revenues minus actual expenses, expenses that are not under the direct control of the airport influence them greatly. For that reason, Commissioner Greeley recommended that expenses/revenues associated with snow removal, FEMA reimbursements* and the Town’s share of annual grants be removed from the calculation so that we are able to identify net earnings trends and determine the key factors contributing to any trends identified.

**In FY15, the town received a FEMA reimbursement of \$22,519 for snowstorm related expenses for the winter of February 2013. Additionally, \$30,000 for snow removal for FY15 reflects the FY15 budgeted amount. Due to the severity of the winter of 2014/2015, the Town spent \$152,000 of Free Cash on snow removal. In FY18, the Town received another FEMA reimbursement of \$22,863 for snowstorm related expenses that were incurred in FY17 but considered revenue for FY18 due to the timing of its receipt.*

The below chart displays the revised five-year history of revenues, expenses and net earnings with snow removal expenses, FEMA reimbursements and grant costs (Town's share) excluded.



The purpose of this exercise is to **identify trends**. Looking at this chart, the trend during this period is one of flat revenue growth with expenses trending up. The chart shows that over this period revenues have been relatively flat running from a low of \$416,539 and a high of \$422,558. In only one fiscal year (FY16) did year-on-year revenues experience growth. During the other fiscal years, year-on-year revenues were in the negative.

Expenses have shown more fluctuations over this time ranging from \$270,419 to \$321,069.

“Net Earnings” for FY16 and FY17 are the lowest for the 5-year period beginning on July 1, 2012.

A summary of the data used for this chart is in **Attachment B- “Revised Analysis for Net Earnings Trends.”**

Please note that although removed from these calculations for this exercise, snow removal costs have averaged \$44,000 per year over the 5-year period. Average matching grant costs for Norwood averaged \$16,000 per year over the 5-year period.

Additionally, the expenses detailed in this chart do not include the items recommended by Commissioner Greeley to account for the costs of services provided by the Town. Adding these costs to the expense mix will provide a more realistic look at “net earnings” generated by the airport over this period.

Additional Costs for Town Services and Benefits

Commissioner Greeley identified the following additional cost items for airport operations:

- General Support (Accounting, Treasury, Data Processing)
- Legal/Litigation costs
- Airport Insurance (Airport General Liability and Airport Directors and Officers policies)
- Employee Benefit Costs
- Police and Fire Services

With the exception of “general support”, expense history from FY17 and FY18 was obtained from Town departments.

General support includes services such as payroll processing, invoice and payment processing, benefits administration and information technology support. To estimate general support expenses, a factor of 1.4% of total expenses was applied. For the purpose of this exercise, the report utilizes an expense formula similar to one used in Mansfield to estimate these costs. The report did not include an estimate for fire and police services. Although an argument can be made that fire and police services are provided to the airport and are relatively significant (e.g., joint training exercises and development of emergency response protocols), a reasonable benchmark for these costs was not found and the report does not include them in any of the analyses.

Town departments provided FY17 benefit cost estimates, costs for airport insurance and for legal/litigation expenses.

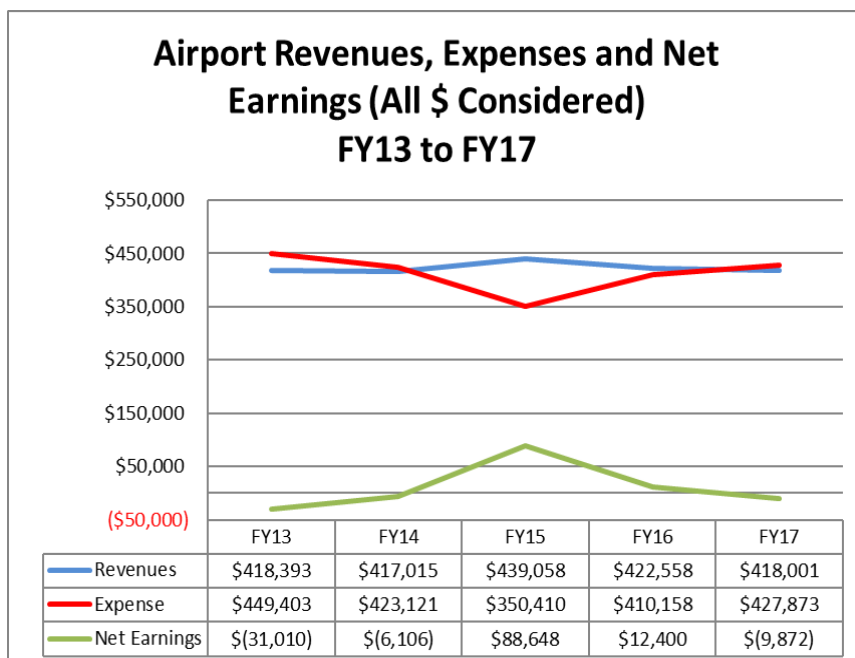
To estimate benefit costs, a formula of 30% of salary recommended by the Town’s actuary was applied to the expense line. The Airport Manager does not take health insurance from the town. The benefit cost estimate for the Airport Manager was adjusted down to reflect this.

The calculation for expenses used an estimate of 12.9% of total expenses for these categories in FY17. This was applied to the expense lines for FY13 through FY16 in order to provide a reasonable estimate of their impact on each fiscal year’s net earnings.

Finally, now that we have identified slow/flat growth in airport revenues as the primary reasons for the trend, for this analysis, actual expenses for snow removal, FEMA reimbursements and the Town’s expense for grants were added back into the mix for the FY13 to FY17 period.

Attachment C- “All Data Considered” provides a table summarizing all information associated with this particular analysis. As the name implies, the purpose of this analysis is to see what our net earnings would be when we consider all our revenue sources and all expenses in the mix during this 5-year period.

The below chart displays the revenue, expense and net earnings trends from FY13 to FY17 with the addition of these expenses and revenues that were not included in the net earnings calculation displayed in Attachment B.



Looking at this “what-if” chart, the airport would have likely operated at a net loss in FY17, FY14 and FY13. However, during the entire 5-year period, the airport generated positive net earnings of nearly \$54,000 or an annual average of \$10,800.

SECTION 2: REVIEW OF AIRPORT REVENUE SOURCES AND EXPENSES

This section briefly summarizes airport expenses and revenue sources.

Airport Revenues

Leases

Approximately 50% of revenues in FY17 revenues came from leases. There are seven (7) entities on lease arrangements. Leases have 2% yearly increase requirements attached to them. The Airport owns only one building on site.

Airport Manager Maguire provided a 2009 "Hangar Lease Survey" of eight (8) public-use airports, which identifies lease rates for these airports. Our lease rate (\$0.34 per square foot) seems to be quite competitive (actually at the upper end of the surveyed airports).

According to Mr. Maguire, the demand for hangar space continues to outstrip supply. Please see the below table for lease rates reported in the 2009 study.

Airport Sponsor	Publicly Owned New Hangar Development	Lease rate, Publicly Owned Hangars	Ground Lease Rate, Privately Owned Hangars
Hanscom	None	N/A	\$2.30 sq./ft.
Lawrence	None	N/A	\$0.40 sq./ft.
Beverly	None	N/A	\$0.22 sq./ft.
Taunton	None	N/A	\$0.15 sq./ft.
Plymouth	None	N/A	\$0.32 sq./ft.
Hyannis	Yes	\$2.67 sq./ft.	N/A
Westfield	Yes	\$0.39 sq./ft.	\$0.18 sq./ft.
Orange	None	N/A	\$0.25 sq./ft.
Norwood			\$0.34 sq./ft.

The 2009 study on hangar development details the regional demand for hangar space.

Mr. Maguire and Mr. Ryan identified a number of new potential revenue opportunities from future development of hangars and new buildings on site. These include a hangar adjacent to the 1100 ft by 300 ft BMA lease area. The Fixed Based Operator (FBO), Flight Level, would be able to lease and operate this hangar. This could potentially bring in annual revenues roughly in the area of \$30,000.

The “business model” suggested by Airport Management is a lease-to-build model (as opposed to the Town constructing and managing hangars directly). Details of the costs/benefits of leasing vs. the Town constructing and operating are detailed in the lease study.

The Conservation Commission has approved plans to place a hangar on property near the Airport’s SRE building. Such a hangar could generate annual revenues of approximately \$30,000 to \$35,000. The airport will issue a Request for Proposal (RFP) shortly.

The Airport leases property adjacent to the airport for car storage. This land is not used for aviation purposes. It does generate lease income and excise tax income from Verizon and other private entities for automobile storage.

Another future opportunity airport management has identified are plans to develop an office building near the main parking area. This would be a lease-to-build arrangement with a private entity. In addition to office space, this building could possibly host a restaurant. This would require an updated lease study.

Fees

Fees for tie-downs and flowage do not contribute to revenue generation as significantly as leases (12% to 14% of total revenues over the 5-year period).

Flowage fees on fuel generate anywhere from 6.6% to 8.2% of total revenues. Flowage fees are \$.07 per gallon of fuel (Flight Level is the fuel operator and it collects the fee).

Tie-down fees have contributed anywhere from 4.3% to 6% of total revenues. Tie-down fees (for "push backs") are \$265 per quarter for about 32 tie downs. Another six (6) larger aircraft pay a fee of \$305 per quarter for tie-downs. Flight Level operates the Transient Parking Facility. There are no parking fees for aircraft parked at that facility; however, the Airport does collect revenues via the lease arrangement with Flight Level.

The Airport collects **Commercial fees** from instructors and charter flights. These generate less than 1% of total revenues over the 5-year period.

Airport Management produces **Security badges**. The charge is \$50 per badge. Each badge is good for three (3) years. This is a small revenue source generating approximately 1.5% to 2% of total revenues.

Jet Fuel Tax

The jet fuel tax generates revenues ranging from a low of 4.3% to a high of 20.1% of total revenue during this 5-year period. There was a significant decrease in jet fuel tax revenues from FY16 to FY17 (\$56,360 to \$17,822). In FY13, the Town received \$84,181 in jet fuel taxes. The decline in revenue from this source is due to a change in the state's fuel tax rate. The state collects the tax and distributes the revenue to the municipality. The tax rate per gallon of jet fuel has dropped by over 50% since FY14 (i.e., from \$0.158 per gallon to \$0.074 per gallon).

A history of the jet fuel tax rates obtained from the Massachusetts Department of Revenue is included at the end of the report (**Attachment D**).

Excise Taxes

Verizon vehicles parked at the Access Road lot generate excise tax revenues. These represent about 4.6% of total revenues. This revenue source has grown over the period from a low of \$5,462 in FY15 to \$19,241 in FY17.

PILOT/RE Taxes

Payments-In-Lieu-of-Taxes and real estate taxes generate approximately 25% of total revenues. Revenue generated from this source has steadily increased during the five-year period.

Total Revenue

Attachment E is a pie chart summarizing all revenues by source and amount for the FY13 to FY17 period. Total revenue generated during this period was over \$2.1 million.

Airport Expenses

Salaries

Salary expenses for the two airport employees represent over 45% of airport expenses. This expense items will continue to increase annually with changes in compensation established in collective bargaining agreements and approved non-union pay increases.

Maintenance Expenses

Operations expenses represent about 45% of airport costs. Maintenance expenses associated with snow removal and facility operations are the leading cost factors in airport operations. Vegetation management, rent and vehicle and ground equipment maintenance are also in the mix for maintenance expenses.

Grants and Assurances

Airport Management provided a spreadsheet summary of the projects funded through grants since 1991. Norwood Airport has receives a total of \$20,265,000 in grants during this period. Of this, the Town of Norwood funded \$776,900 or 3.8%.

These grants fund a number of construction and environmental projects at the airport. The annual budget does not include these expenses or the revenues from grants and as such, are not included in this analysis.

Airport management confirmed that such grants do call for all funds generated by the airport be set aside exclusively for the airport operations. DOT and FAA restrict "revenue diversions."

Debt

Norwood Memorial Airport does not currently carry any debt.

SECTION 3: SUMMARY AND RECOMMENDATIONS

REVENUES

During the period of FY13 through FY17, revenue growth was stagnant. Expenses are growing at a higher rate leading to a diminishing of airport "net earnings" in FY16 and FY17.

The current trend of flat revenues and diminishing net earnings requires attention and review. The Airport Commission needs to continue researching new development opportunities and changes in fee structures and levels in order to improve the profitability of the airport and become more financially self-sustaining.

The Airport Commission should consider tactics that will address revenue growth and enhancement.

Table of Recommendations

Revenue Area	Comment	Recommendation
Hangar Development	Airport management is very optimistic about future revenues opportunities from hangar development and other development concepts. These do sound very promising. It seems that our lease rates are competitive. However, these opportunities are mostly out a few fiscal years and will not provide additional revenues in FY18 nor will they, I suspect, in FY19.	Update the hangar lease survey and include the eight (8) airports identified by the Personnel Board as comparable to Norwood to determine if our lease arrangements remain competitive. The 2009 survey included five (5) of those eight airports. As a matter of consistency going forward, we should reach out to these eight airports for all data collection. The comparable airports used in the Personnel Board study were: <ol style="list-style-type: none"> 1. Beverly Municipal Airport 2. Fitchburg Municipal Airport 3. Lawrence Municipal Airport 4. Mansfield Municipal Airport 5. Orange Municipal Airport 6. Pittsfield Municipal Airport

		7. Plymouth Municipal Airport 8. Westfield-Barnes Regional Airport
Fuel Services	The 2007 Master Plan Update included a financial analysis of the cost and benefits of a Town-operated fuel farm. That analysis indicated that a fuel service operated by the Town would require three (3) employees and an investment in equipment as well as the direct purchase of fuel. Estimated annual profit from such an operation was \$357,000 in 2007.	Hold further discussions. A town-owned fuel farm would compete with the current FBO and any future FBO that may also operate a fuel farm. Current litigation may also complicate the town's ability to develop and operate its own fuel farm.
Landing Fees	Norwood does not charge any landing fees. Landing fees were last in existent in the late 1990's. Russ Maguire reports that the Airport Commission had landing fees for aircraft exceeding 5,000 pounds. The fee was very unpopular with users and did not generate a lot of revenue and the fee system ended	Conduct a survey of the eight comparable airports to determine which airports charge landing fees; collect fee level data; and, collect detail on revenue generated from these fees.
Tie-Down Leases	Tie-down fees (for "push backs") are \$265 per quarter for about 32 tie downs. Another six (6) larger aircraft pay a fee of \$305 per quarter for tie-downs. Flight Level operates the Transient Parking Facility. There are no parking fees for aircraft parked at that facility; however, the Airport does collect revenues via the lease arrangement with Flight Level.	Conduct a survey of the comparable airports to determine tie-down fee levels established by these airports and the revenue generated from these fees.
Flowage Fees	Norwood's flowage fee for fuel is \$0.07 per gallon. The FBO (Flight Level) collects the flowage fee. The last increase in flowage fees was in March 2016 (an increase from \$0.06 per gallon to \$0.07 per gallon). Given the loss of revenue from the jet fuel tax, flowage fees may provide an opportunity to make up for some of that lost revenue.	The Airport should conduct a survey of the comparable airports to determine the current flowage fee levels established by these airports and the revenue generated from these fees. Assess whether our fees are competitive or if there is an opportunity to increase fees to generate additional revenues.
Jet Fuel Tax	Due to changes in the state's tax rate, revenue from this source is dwindling over time. It does not appear that Norwood is offsetting this decline in jet fuel revenues with other revenue sources.	Initiate a request to our local legislators to advocate for a tax formula that is more financially beneficial the Town.
Enterprise Fund	Several airports among those comparable to Norwood use enterprise-funding arrangements to organize airport finances. In such arrangements, revenues generated by airport operations fund operations.	Establish a task force to examine the pros and cons of having Norwood Memorial Airport operate as an enterprise fund.
Fee Schedules	A number of comparable municipal airports publish their fees on the municipality's web site.	Post Norwood Airport fees on the Town's web site in order to enhance transparency and promote the airport to users.
1100 ft x 300 ft strip	In 1967, Boston Metropolitan Airport (BMA) sued the Town and the resulting award was an 80-year lease to BMA with no land lease payment to the Airport /Town. As a result, Norwood is unable to generate additional lease revenue from land that represents some 30% of total usable/leasable area of the airport's..	Establish a task force to study the BMA lease area and determine if it is feasible to buy BMA out of the lease.

Master Plan		Consider including a 3 to 5 year financial forecast or plan in the Airport's Master Plan that includes net earnings references.
Annual review of Net Earnings		On an annual basis, conduct a net earnings exercise similar to the one presented in this report.

EXPENSES

When the Snow Removal Equipment (SRE) Building is completed, Airport administrative offices will relocate to the second floor of that building. This will negate the need for renting office space. In FY17, rent and utility expenses were \$23,396 or 6.3% of total expenses.

The SRE building was constructed using money from DOT grants. Phase II involves building out the second floor with a completion date in FY19. MassDot has advised the airport that the grant needed to complete Phase II is forthcoming. At this time, it is not known as to what the local share of the grant will be.

In general, total expenses during this five-year period varied from a low of \$349,000 in FY15 to a high of \$448,000 in FY13. This variation is mostly due to the unpredictable nature of snow removal costs, differences in the Town's share of grants and year-to-year changes in maintenance project work and priorities.

BUDGET HISTORY

The airport link on the town's website cites the following detail regarding the financial support Norwood provides to the airport:

"The Airport Department receives its operating budget via an appropriation from Town Meeting. During the fiscal year, the airport draws revenue—through land leases to aviation and non-aviation businesses, aircraft tie-down leases, fuel flowage fees, jet fuel taxes, payments in lieu of taxes, as well as permit and badging fees. These revenues are then returned to the Town's General Fund."

Summarized below is the history of the Town's financial support to the Airport (as reported in the FY18 Town Budget Document):

FY15 (Actuals)	FY16 (Actuals)	FY17 (Budget)	FY18 (Budget)
\$305,336	\$357,397	\$353,269	\$375,269

NET EARNINGS

As reported previously, the addition of other town services affects airport net earnings over this five-year period. With tight profit margins, these expenses have tended to sink airport net earnings to the negative in three of the five years from FY13 to FY17.

This analysis supports the need for enhanced revenue generation in order to support year-on-year growth in net earnings and reduce reliance on taxation as a source of funding airport operations.

SECTION 4: ECONOMIC IMPACT

Public use airports such as Norwood host flight training schools, aircraft maintenance companies, restaurants and other aviation related businesses. They provide an economic contribution to the Town and region beyond the revenue received from airport users. In 2014, the Massachusetts Department of Transportation (Mass DOT) updated a study funded by the Federal Aviation Administration that provides a perspective on the economic benefits publicly owned airports make to the regional economy.

Using FAA methodology, the study estimated that Norwood Memorial Airport had the greatest economic impact (\$52.2 million), largest total employment (394 jobs) and highest economic output of \$52.2 million among airports in the region. A copy of that report is included in this report.

Norwood Airport is one of busiest airports within its comparable peer group with more than 60,000 scheduled flights on average per year. It is important that this report recognize the significant contribution the airport makes to our local economy.

Attachment A-Actuals		NORWOOD MEMORIAL AIRPORT HISTORY OF REVENUES AND EXPENSES									
		FY2013		FY2014		FY2015		FY2016		FY2017	
		Actual		Actual		Actual		Actual		Actual	
Revenue											
Direct											
4423-8703	ST Leases	\$ 75,514	18.0%	\$ 84,379	20.2%	\$ 99,277	22.6%	\$ 83,413	19.7%	\$ 91,478	21.9%
4424-8702	LT Leases	95,840	22.9%	105,172	25.2%	96,075	21.9%	104,907	24.8%	118,102	28.3%
4425-8704	Flowage Fees	34,273	8.2%	33,988	8.2%	27,374	6.2%	30,651	7.3%	32,555	7.8%
4426-8706	A/C Tie Down Leases	25,273	6.0%	23,489	5.6%	18,735	4.3%	18,271	4.3%	22,244	5.3%
4491-8075	Misc Revenues	574	0.1%	938	0.2%	306	0.1%	717	0.2%	781	0.2%
4491-8884	Security Passes	8,400	2.0%	7,000	1.7%	6,500	1.5%	9,200	2.2%	6,270	1.5%
Total Direct		239,874	57.3%	254,966	61.1%	248,267	56.5%	247,159	58.5%	271,430	64.9%
Indirect											
4600-8610	Jet Fuel Tax	84,181	20.1%	62,178	14.9%	65,862	15.0%	56,360	13.3%	17,822	4.3%
N/A	FEMA Reimbursement	-	0.0%	-	0.0%	22,519	5.1%	-	0.0%	-	0.0%
N/A	R/E Tax - Flight Level	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
N/A	PILOT - BMA	85,398	20.4%	92,933	22.3%	96,948	22.1%	105,851	25.1%	109,508	26.2%
N/A	PILOT - Verizon Excise Tax	8,940	2.1%	6,938	1.7%	5,462	1.2%	13,188	3.1%	19,241	4.6%
Total Indirect		178,519	42.7%	162,049	38.9%	190,791	43.5%	175,399	41.5%	146,571	35.1%
Total Revenue		418,393	100.0%	417,015	100.0%	439,058	100.0%	422,558	100.0%	418,001	100.0%
Expenses											
SALARIES											
P1069	Airport Salaries - Part Time	1,501	0.4%	1,271	0.3%	-	0.0%	-	0.0%	-	0.0%
P1344	Airport Salaries - Longevity	1,000	0.3%	1,000	0.3%	1,200	0.4%	-	0.0%	1,500	0.4%
P6014	Airport Salaries - Manager	85,594	21.9%	87,307	23.7%	89,053	29.2%	91,257	25.5%	93,561	25.1%
P6015	Airport Salaries - Asst. Manager	67,753	17.3%	69,108	18.8%	70,490	23.1%	72,236	20.2%	74,058	19.9%
P7067	Airport Salaries - Overtime	6,041	1.5%	4,995	1.4%	4,938	1.6%	7,464	2.1%	7,884	2.1%
Total Salaries		161,889	41.4%	163,681	44.4%	165,681	54.3%	170,957	47.8%	177,003	47.5%
OPERATIONS											
P1327	Airport Oper - Rent / Utilities	20,644	5.3%	20,644	5.6%	20,644	6.8%	20,903	5.8%	23,369	6.3%
P1328	Airport Oper - Communications	2,864	0.7%	3,160	0.9%	2,803	0.9%	3,107	0.9%	3,610	1.0%
P1329	Airport Oper - Incidentals	7,394	1.9%	9,468	2.6%	15,749	5.2%	7,636	2.1%	14,696	3.9%
P6843	Airport Oper - Util & Equip	13,871	3.5%	14,949	4.1%	10,880	3.6%	12,121	3.4%	11,447	3.1%
P6844	Airport Oper - Vegetation Mgmt.	12,365	3.2%	24,620	6.7%	10,400	3.4%	23,855	6.7%	11,305	3.0%
P6845	Airport Oper - Snow Removal	61,905	15.8%	51,370	13.9%	30,000	9.8%	-	0.0%	-	0.0%
P6846	Airport Oper - Veh & Ground Equip	7,051	1.8%	8,052	2.2%	21,084	6.9%	9,886	2.8%	7,131	1.9%
P6847	Airport Oper - Facility	60,196	15.4%	18,086	4.9%	9,432	3.1%	54,915	15.4%	42,278	11.3%
P7026	Airport Security	4,732	1.2%	4,566	1.2%	4,347	1.4%	8,754	2.4%	2,841	0.8%
P2136	Airport Eng Studies	2,500	0.6%	2,700	0.7%	3,000	1.0%	-	0.0%	7,619	2.0%
P3068	Airport Snow and Ice	-	0.0%	-	0.0%	-	0.0%	31,223	8.7%	45,740	12.3%
Total Airport Operations		193,522	49.4%	157,615	42.8%	128,339	42.0%	172,400	48.2%	170,036	45.6%
INCIDENTALS											
P2050	Airport Incid - Advertising	1,029	0.3%	-	0.0%	199	0.1%	-	0.0%	33	0.0%
P2054	Airport Incid - Travel Allowance	169	0.0%	1,379	0.4%	-	0.0%	190	0.1%	443	0.1%
P2056	Airport Incid - Steno	491	0.1%	1,189	0.3%	780	0.3%	1,358	0.4%	980	0.3%
P2063	Airport Incid - Repairs	4,537	1.2%	3,871	1.1%	4,105	1.3%	6,317	1.8%	4,617	1.2%
P2064	Airport Incid - Noise Education	-	0.0%	500	0.1%	1,040	0.3%	-	0.0%	520	0.1%
P2359	Airport Incid - Professional Devel	-	0.0%	-	0.0%	275	0.1%	1,070	0.3%	1,109	0.3%
Total Incidentals		6,226	1.6%	6,939	1.9%	6,399	2.1%	8,935	2.5%	7,702	2.1%
MATCHING GRANT COST											
P2060	Airport Construc - Matching Grant	29,796	7.6%	40,323	10.9%	4,916	1.6%	5,105	1.4%	17,932	4.8%
TOTAL COST		391,433	100.0%	368,558	100.0%	305,335	100.0%	357,397	100.0%	372,673	100.0%
NET EARNINGS		\$ 26,960	6.9%	\$ 48,457	13.1%	\$ 133,723	43.8%	\$ 65,161	18.2%	\$ 45,328	12.2%

Attachment B-Revised Analysis for Trends

NORWOOD MEMORIAL AIRPORT											
HISTORY OF REVENUES AND EXPENSES											
		FY2013		FY2014		FY2015		FY2016		FY2017	
		Actual		Actual		Actual		Actual		Actual	
Revenue											
Direct											
4423-8703	ST Leases	\$ 75,514	18.0%	\$ 84,379	20.2%	\$ 99,277	23.8%	\$ 83,413	19.7%	\$ 91,478	21.9%
4424-8702	LT Leases	95,840	22.9%	105,172	25.2%	96,075	23.1%	104,907	24.8%	118,102	28.3%
4425-8704	Flowage Fees	34,273	8.2%	33,988	8.2%	27,374	6.6%	30,651	7.3%	32,555	7.8%
4426-8706	A/C Tie Down Leases	25,273	6.0%	23,489	5.6%	18,735	4.5%	18,271	4.3%	22,244	5.3%
4491-8075	Misc Revenues	574	0.1%	938	0.2%	306	0.1%	717	0.2%	781	0.2%
4491-8884	Security Passes	8,400	2.0%	7,000	1.7%	6,500	1.6%	9,200	2.2%	6,270	1.5%
Total Direct		239,874	57.3%	254,966	61.1%	248,267	59.6%	247,159	58.5%	271,430	64.9%
Indirect											
4600-8610	Jet Fuel Tax	84,181	20.1%	62,178	14.9%	65,862	15.8%	56,360	13.3%	17,822	4.3%
N/A	FEMA Reimbursement	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
N/A	R/E Tax - Flight Level	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
N/A	PILOT - BMA	85,398	20.4%	92,933	22.3%	96,948	23.3%	105,851	25.1%	109,508	26.2%
N/A	PILOT - Verizon Excise Tax	8,940	2.1%	6,938	1.7%	5,462	1.3%	13,188	3.1%	19,241	4.6%
Total Indirect		178,519	42.7%	162,049	38.9%	168,272	40.4%	175,399	41.5%	146,571	35.1%
Total Revenue		418,393	100.0%	417,015	100.0%	416,539	100.0%	422,558	100.0%	418,001	100.0%
Expenses											
SALARIES											
P1069	Airport Salaries - Part Time	1,501	0.5%	1,271	0.5%	-	0.0%	-	0.0%	-	0.0%
P1344	Airport Salaries - Longevity	1,000	0.3%	1,000	0.4%	1,200	0.4%	-	0.0%	1,500	0.5%
P6014	Airport Salaries - Manager	85,594	28.6%	87,307	31.5%	89,053	32.9%	91,257	28.4%	93,561	30.3%
P6015	Airport Salaries - Asst. Manager	67,753	22.6%	69,108	25.0%	70,490	26.1%	72,236	22.5%	74,058	24.0%
P7067	Airport Salaries - Overtime	6,041	2.0%	4,995	1.8%	4,938	1.8%	7,464	2.3%	7,884	2.6%
Total Salaries		161,889	54.0%	163,681	59.1%	165,681	61.3%	170,957	53.2%	177,003	57.3%
OPERATIONS											
P1327	Airport Oper - Rent / Utilities	20,644	6.9%	20,644	7.5%	20,644	7.6%	20,903	6.5%	23,369	7.6%
P1328	Airport Oper - Communications	2,864	1.0%	3,160	1.1%	2,803	1.0%	3,107	1.0%	3,610	1.2%
P1329	Airport Oper - Incidentals	7,394	2.5%	9,468	3.4%	15,749	5.8%	7,636	2.4%	14,696	4.8%
P6843	Airport Oper - Util & Equip	13,871	4.6%	14,949	5.4%	10,880	4.0%	12,121	3.8%	11,447	3.7%
P6844	Airport Oper - Vegetation Mgmt.	12,365	4.1%	24,620	8.9%	10,400	3.8%	23,855	7.4%	11,305	3.7%
P6845	Airport Oper - Snow Removal	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
P6846	Airport Oper - Veh & Ground Equip	7,051	2.4%	8,052	2.9%	21,084	7.8%	9,886	3.1%	7,131	2.3%
P6847	Airport Oper - Facility	60,196	20.1%	18,086	6.5%	9,432	3.5%	54,915	17.1%	42,278	13.7%
P7026	Airport Security	4,732	1.6%	4,566	1.6%	4,347	1.6%	8,754	2.7%	2,841	0.9%
P2136	Airport Eng Studies	2,500	0.8%	2,700	1.0%	3,000	1.1%	-	0.0%	7,619	2.5%
P3068	Airport Snow and Ice	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Total Airport Operations		131,617	43.9%	106,245	38.4%	98,339	36.4%	141,177	44.0%	124,296	40.2%
INCIDENTALS											
P2050	Airport Incid - Advertising	1,029	0.3%	-	0.0%	199	0.1%	-	0.0%	33	0.0%
P2054	Airport Incid - Travel Allowance	169	0.1%	1,379	0.5%	-	0.0%	190	0.1%	443	0.1%
P2056	Airport Incid - Steno	491	0.2%	1,189	0.4%	780	0.3%	1,358	0.4%	980	0.3%
P2063	Airport Incid - Repairs	4,537	1.5%	3,871	1.4%	4,105	1.5%	6,317	2.0%	4,617	1.5%
P2064	Airport Incid - Noise Education	-	0.0%	500	0.2%	1,040	0.4%	-	0.0%	520	0.2%
P2359	Airport Incid - Professional Devel	-	0.0%	-	0.0%	275	0.1%	1,070	0.3%	1,109	0.4%
Total Incidentals		6,226	2.1%	6,939	2.5%	6,399	2.4%	8,935	2.8%	7,702	2.5%
MATCHING GRANT COST											
P2060	Airport Construc - Matching Grant	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
		-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
TOTAL COST		299,732	100.0%	276,865	100.0%	270,419	100.0%	321,069	100.0%	309,001	100.0%
NET EARNINGS		\$ 118,661	39.6%	\$ 140,150	50.6%	\$ 146,120	54.0%	\$ 101,489	31.6%	\$ 109,000	35.3%

Attachment C-All Data Considered

NORWOOD MEMORIAL AIRPORT
HISTORY OF REVENUES AND EXPENSES

		FY2013		FY2014		FY2015		FY2016		FY2017	
		Actual		Actual		Actual		Actual		Actual	
Revenue											
Direct											
4423-8703	ST Leases	\$ 75,514	18.0%	\$ 84,379	20.2%	\$ 99,277	22.6%	\$ 83,413	19.7%	\$ 91,478	21.9%
4424-8702	LT Leases	95,840	22.9%	105,172	25.2%	96,075	21.9%	104,907	24.8%	118,102	28.3%
4425-8704	Flowage Fees	34,273	8.2%	33,988	8.2%	27,374	6.2%	30,651	7.3%	32,555	7.8%
4426-8706	A/C Tie Down Leases	25,273	6.0%	23,489	5.6%	18,735	4.3%	18,271	4.3%	22,244	5.3%
4491-8075	Misc Revenues	574	0.1%	938	0.2%	306	0.1%	717	0.2%	781	0.2%
4491-8884	Security Passes	8,400	2.0%	7,000	1.7%	6,500	1.5%	9,200	2.2%	6,270	1.5%
Total Direct		239,874	57.3%	254,966	61.1%	248,267	56.5%	247,159	58.5%	271,430	64.9%
Indirect											
4600-8610	Jet Fuel Tax	84,181	20.1%	62,178	14.9%	65,862	15.0%	56,360	13.3%	17,822	4.3%
N/A	FEMA Reimbursement	-	0.0%	-	0.0%	22,519	5.1%	-	0.0%	-	0.0%
N/A	R/E Tax - Flight Level	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
N/A	PILOT - BMA	85,398	20.4%	92,933	22.3%	96,948	22.1%	105,851	25.1%	109,508	26.2%
N/A	PILOT - Verizon Excise Tax	8,940	2.1%	6,938	1.7%	5,462	1.2%	13,188	3.1%	19,241	4.6%
Total Indirect		178,519	42.7%	162,049	38.9%	190,791	43.5%	175,399	41.5%	146,571	35.1%
Total Revenue		418,393	100.0%	417,015	100.0%	439,058	100.0%	422,558	100.0%	418,001	100.0%
Expenses											
SALARIES											
P1069	Airport Salaries - Part Time	1,501	0.3%	1,271	0.3%	-	-	-	-	-	-
P1344	Airport Salaries - Longevity	1,000	0.2%	1,000	0.2%	1,200	0.3%	-	-	1,500	0.4%
P6014	Airport Salaries - Manager	85,594	19.0%	87,307	20.6%	89,053	25.4%	91,257	22.2%	93,561	22.4%
P6015	Airport Salaries - Asst. Manager	67,753	15.1%	69,108	16.3%	70,490	20.1%	72,236	17.6%	74,058	17.7%
P7067	Airport Salaries - Overtime	6,041	1.3%	4,995	1.2%	4,938	1.4%	7,464	1.8%	7,884	1.9%
	Total Salaries	161,889	36.0%	163,681	38.7%	165,681	47.3%	170,957	41.7%	177,003	41.4%
OPERATIONS											
P1327	Airport Oper - Rent / Utilities	20,644	4.6%	20,644	4.9%	20,644	5.9%	20,903	5.1%	23,369	5.6%
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P6843	Airport Oper - Util & Equip	13,871	3.1%	14,949	3.5%	10,880	3.1%	12,121	3.0%	11,447	2.7%
P6844	Airport Oper - Vegetation Mgmt.	12,365	2.8%	24,620	5.8%	10,400	3.0%	23,855	5.8%	11,305	2.7%
P6845	Airport Oper - Snow Removal	61,905	13.8%	51,370	12.1%	30,000	8.6%	-	-	-	-
P6846	Airport Oper - Veh & Ground Equip	7,051	1.6%	8,052	1.9%	21,084	6.0%	9,886	2.4%	7,131	1.7%
P6847	Airport Oper - Facility	60,196	13.4%	18,086	4.3%	9,432	2.7%	54,915	13.4%	42,278	10.1%
P7026	Airport Security	4,732	1.1%	4,566	1.1%	4,347	1.2%	8,754	2.1%	2,841	0.7%
P2136	Airport Eng Studies	2,500	0.6%	2,700	0.6%	3,000	0.9%	-	-	7,619	1.8%
P3068	Airport Snow and Ice	-	-	-	-	-	-	31,223	7.6%	45,740	10.9%
	Total Airport Operations	193,522	43.1%	157,615	37.3%	128,339	36.6%	172,400	42.0%	170,036	40.7%
INCIDENTALS											
P2050	Airport Incid - Advertising	1,029	0.2%	-	-	199	0.1%	-	-	33	0.0%
P2054	Airport Incid - Travel Allowance	169	0.0%	1,379	0.3%	-	-	190	0.0%	443	0.1%
P2056	Airport Incid - Steno	491	0.1%	1,189	0.3%	780	0.2%	1,358	0.3%	980	0.2%
P2063	Airport Incid - Repairs	4,537	1.0%	3,871	0.9%	4,105	1.2%	6,317	1.5%	4,617	1.1%
P2064	Airport Incid - Noise Education	-	-	500	0.1%	1,040	0.3%	-	-	520	0.1%
P2359	Airport Incid - Professional Devel	-	-	-	-	275	0.1%	1,070	0.3%	1,109	0.3%
	Total Incidentals	6,226	1.4%	6,939	1.6%	6,399	1.8%	8,935	2.2%	7,702	1.8%
MATCHING GRANT COST											
P2060	Airport Construc - Matching Grant	29,796	6.6%	40,323	9.5%	4,916	1.4%	5,105	1.2%	17,932	4.3%
		29,796	6.6%	40,323	9.5%	4,916	1.4%	5,105	1.2%	17,932	4.3%
Other Costs (J. Greeley Model)											
	General Support (Acct, Treasury, IT)	-	-	-	-	-	-	-	-	6,000	1.4%
	Legal/Litigation	-	-	-	-	-	-	-	-	10,400	2.5%
	Airport Insurance	-	-	-	-	-	-	-	-	13,800	3.3%
	Employee Benefits Cost (est @ 30% of salaries)	-	-	-	-	-	-	-	-	25,000	6.0%
	Total Other Costs	57,970	12.9%	54,563	12.9%	45,075	12.9%	52,761	12.9%	55,200	12.9%
TOTAL COST		449,403	100%	423,121	100%	350,410	100.0%	410,158	100.0%	427,873	100.0%
NET EARNINGS		\$ (31,010)	-6.9%	\$ (6,106)	-1.4%	\$ 88,648	25.3%	\$ 12,400	3.0%	\$ (9,872)	-2.3%

Attachment D

MASSACHUSETTS FUELS EXCISE RATES

Fourth Quarter 2017
October 1, 2017 - December 31, 2017

Fuel Type	Tax Per Gallon
Gasoline	\$ 0.24
Special Fuels (Diesel)	\$ 0.24
Special Fuels (Liquified Gases/Propane)	\$ 0.132
Aircraft (Jet) Fuel	\$ 0.075
Aviation Gasoline	\$ 0.255

HISTORICAL TAX RATES
Period (Calendar Quarter)

Fuel Type	3Q 17	2Q 17	1Q 17	4Q 16	3Q 16	2Q 16	1Q 16	4Q 15	3Q 15	2Q 15	1Q 15	4Q 14
Gasoline	\$ 0.24	\$ 0.24	\$ 0.24	\$ 0.24	\$ 0.24	\$ 0.24	\$ 0.24	\$ 0.24	\$ 0.24	\$ 0.24	\$ 0.24	\$ 0.24
Special Fuels (Diesel)	\$ 0.24	\$ 0.24	\$ 0.24	\$ 0.24	\$ 0.24	\$ 0.24	\$ 0.24	\$ 0.24	\$ 0.24	\$ 0.24	\$ 0.24	\$ 0.24
Liquified Gases/Propane	\$ 0.142	\$ 0.147	\$ 0.103	\$ 0.107	\$ 0.132	\$ 0.160	\$ 0.108	\$ 0.175	\$ 0.240	\$ 0.180	\$ 0.181	\$ 0.227
Aircraft (Jet)	\$ 0.080	\$ 0.074	\$ 0.067	\$ 0.067	\$ 0.060	\$ 0.074	\$ 0.082	\$ 0.098	\$ 0.095	\$ 0.128	\$ 0.151	\$ 0.151
Aviation Gasoline	\$ 0.216	\$ 0.249	\$ 0.246	\$ 0.236	\$ 0.200	\$ 0.229	\$ 0.255	\$ 0.276	\$ 0.249	\$ 0.282	\$ 0.340	\$ 0.348

Attachment E Total Revenues FY13 - FY17

