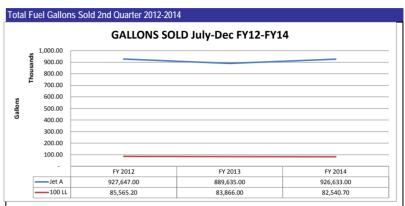


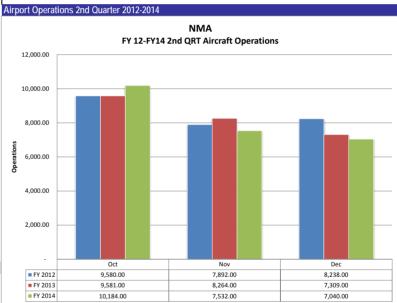
## **FY2014 Airport Enterprise Update**

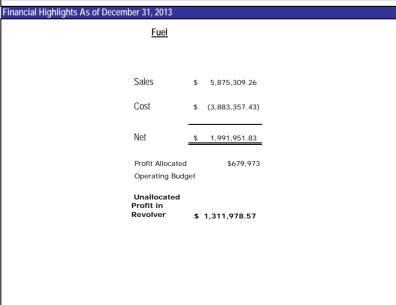
Operating Revenue and Expenditures As of December 31, 2013

% of Certified Retained Earnings Used for One Time or Capital Expenditures \$

	FY2014	FY2014	FY2013		STATISTICS		
REVENUE	Budget w/Carryforward	Actual (As of 12/31/13)	LY Actual (As of 12/31/12)	\$ Variance to budget	\$ Variance to LY	% to Budget	% to LY
Fixed Base Operations (FBO)				. , ,		86%	14%
Revolver: Fuel Sales					. ,	100%	-5%
Fuel Sales in Excess of Revolving Fund				,		36%	100%
Rental Income	.,			, ,		48%	18%
Fee Income				, ,		62%	4%
Vehicle Income Interest on Investments				, ,		45% 38%	27% -68%
Other Income				. , ,		101%	-6%
	\$ 12,317,616					76%	9%
OPERATING EXPENDITURES WITHOUT DEBT	Dudash u/Cam famuard	A -t (A (12/21/12)	IV A - 1 I (A 5.12/21/12)	¢ Variance to Dudnot	¢ Vorience to I V	0/ to Dudget	0/ +- 1.7/
OPERATING EXPENDITURES WITHOUT DEBT Payroll - Salary	Budget w/Carryforward 2,778,683	Actual (As of 12/31/13) \$ 1,392,405	LY Actual (As of 12/31/12) \$ 1,548,097	\$ Variance to Budget \$ (1,386,278)		% to Budget 50%	% to LY -10%
Medicare P/R Tax Expense				,	. ,	50%	-11%
Medical Insurance				. , ,		49%	14%
Barnstable County Retirement	\$ 512,000			, ,		89%	100%
Fixed Based Operatoins/ Included fuel expense in 2012	\$ 827,965	\$ 514,875	\$ 474,903	\$ (313,090)	\$ 39,972	62%	8%
Revolver: Cost of Fuel				\$ (1,311,979)	\$ (221,456)	75%	-5%
Fuel Expense in Excess of Revolving Fund						0%	0%
Operations				. , ,		38%	33%
Service & Maitnenance					. ,	36%	-7%
Administration						34%	2%
General Insurance				, ,		22%	-52%
Indirect Costs				, ,		34%	-37%
Settlements				. , ,	, ,	0%	-100%
Other Total Expenditures excluding debt	\$ 240,471 <b>\$ 12,532,280</b>			. , ,		0% <b>58%</b>	-100% <b>0%</b>
•	, , , , ,						
Surplus (Deficit) of revenue over expenditures excluding debt	\$ (214,664)	\$ 2,032,425	\$ 1,270,986	\$ 2,247,089	\$ 761,439	-947%	60%
DEBT SERVICE	Budget w/Carryforward	Actual (As of 12/31/13)	LY Actual (As of 12/31/12)	\$ Variance to Budget	\$ Variance to LY	% to Budget	% to LY
Principal				. , ,		59%	34%
Interest				, ,		51%	0%
Issuance Costs				. , ,		0%	0%
BAN Costs, Principal, Interest		` -	\$ 111,790	\$ (316,090)	\$ (111,790)	0%	-100%
			ė	, ,	r	00/	00/
Other Total Debt Service	-	\$ -		\$ -		0% <b>45%</b>	0% <b>4%</b>
Total Debt Service	\$ 1,604,448	\$ - \$ 714,407	\$ 689,665	\$ (890,041)	\$ 24,742	45%	4%
Total Debt Service	-	\$ - \$ 714,407	\$ 689,665	\$ (890,041)	\$ 24,742		
Total Debt Service  Total - Surplus (Deficit) of revenue over all operating expenditures*	\$ 1,604,448	\$ - \$ 714,407	\$ 689,665	\$ (890,041)	\$ 24,742	45%	4%
Total Debt Service  Total - Surplus (Deficit) of revenue over all operating expenditures*	\$ 1,604,448 \$ (1,819,112) Budget w/Carryforward	\$ 714,407 \$ 1,318,018 Actual (As of 12/31/13)	\$ 689,665 \$ 581,321 LY Actual (As of 12/31/12)	\$ (890,041) \$ 3,137,131 \$ Variance to Budget	\$ 24,742 \$ 736,697 \$ Variance to LY	45% -72%	4% 127%
Total Debt Service  Total - Surplus (Deficit) of revenue over all operating expenditures*  OTHER FINANCING SOURCES	\$ 1,604,448 \$ (1,819,112) Budget w/Carryforward \$ 304,598	\$ 714,407 \$ 1,318,018  Actual (As of 12/31/13) \$ 152,299	\$ 689,665 \$ 581,321 LY Actual (As of 12/31/12) \$	\$ (890,041) \$ 3,137,131 \$ Variance to Budget \$ 152,299	\$ 24,742 \$ 736,697 \$ Variance to LY \$ 152,299	45% -72% % to Budget	4% 127% % to LY
Total Debt Service  Total - Surplus (Deficit) of revenue over all operating expenditures*  OTHER FINANCING SOURCES  General Fund Subsidy Transfer from Special Revenue Funds Transfer from Insurance Proceeds	\$ 1,604,448 \$ (1,819,112) Budget w/Carryforward \$ 304,598 \$ -	\$ 714,407 \$ 1,318,018 Actual (As of 12/31/13) \$ 152,299 \$ - \$ -	\$ 689,665 \$ 581,321 LY Actual (As of 12/31/12) \$ - \$ 39,632	\$ (890,041) \$ 3,137,131 \$ Variance to Budget \$ 152,299 \$ -	\$ 24,742 \$ 736,697 \$ Variance to LY \$ 152,299 \$ - \$ (39,632)	45% -72%  % to Budget 50% 0% 100%	4% 127% % to LY 100% 0% -100%
Total Debt Service  Total - Surplus (Deficit) of revenue over all operating expenditures*  OTHER FINANCING SOURCES  General Fund Subsidy Transfer from Special Revenue Funds Transfer from Insurance Proceeds 2013 Encumbrance Carryforward	\$ 1,604,448 \$ (1,819,112) Budget w/Carryforward \$ 304,598 \$ - \$ 172,800	\$ 714,407 \$ 1,318,018  Actual (As of 12/31/13) \$ 152,299 \$ \$ 177,841	\$ 689,665 \$ 581,321 LY Actual (As of 12/31/12) \$ - \$ - \$ 39,632 \$ 260,243	\$ (890,041) \$ 3,137,131 \$ Variance to Budget \$ 152,299 \$ - \$ (5,041)	\$ 24,742 \$ 736,697 \$ Variance to LY \$ 152,299 \$ - \$ (39,632)	45%  -72%  % to Budget  50% 0% 100% 103%	4% 127% % to LY 100% 0% -100% -32%
Total Debt Service  Total - Surplus (Deficit) of revenue over all operating expenditures*  OTHER FINANCING SOURCES  General Fund Subsidy Transfer from Special Revenue Funds Transfer from Insurance Proceeds	\$ 1,604,448 \$ (1,819,112) Budget w/Carryforward \$ 304,598 \$ - \$ 172,800	\$ 714,407 \$ 1,318,018  Actual (As of 12/31/13) \$ 152,299 \$ \$ 177,841	\$ 689,665 \$ 581,321 LY Actual (As of 12/31/12) \$ - \$ - \$ 39,632 \$ 260,243	\$ (890,041) \$ 3,137,131 \$ Variance to Budget \$ 152,299 \$ - \$ (5,041)	\$ 24,742 \$ 736,697 \$ Variance to LY \$ 152,299 \$ - \$ (39,632) \$ (82,402)	45% -72%  % to Budget 50% 0% 100%	4% 127% % to LY 100% 0% -100%
Total Debt Service  Total - Surplus (Deficit) of revenue over all operating expenditures*  OTHER FINANCING SOURCES  General Fund Subsidy Transfer from Special Revenue Funds Transfer from Insurance Proceeds 2013 Encumbrance Carryforward Voted Use of Certified Retained Earnings	\$ 1,604,448 \$ (1,819,112) Budget w/Carryforward \$ 304,598 \$ - \$ 172,800	\$ 714,407  \$ 1,318,018  Actual (As of 12/31/13)  \$ 152,299  \$ - \$ - \$ 177,841 \$ 1,341,714	\$ 689,665 \$ 581,321 LY Actual (As of 12/31/12) \$ - \$ 39,632 \$ 260,243 \$ 336,061	\$ (890,041) \$ 3,137,131 \$ Variance to Budget \$ 152,299 \$ - \$ (5,041) \$	\$ 24,742 \$ 736,697 \$ Variance to LY \$ 152,299 \$ - \$ (39,632) \$ (82,402) \$ 1,005,653	45%  -72%  % to Budget  50% 0% 100% 103%	4% 127% % to LY 100% 0% -100% -32% 299%
Total Debt Service  Total - Surplus (Deficit) of revenue over all operating expenditures*  OTHER FINANCING SOURCES  General Fund Subsidy Transfer from Special Revenue Funds Transfer from Insurance Proceeds 2013 Encumbrance Carryforward Voted Use of Certified Retained Earnings	\$ 1,604,448 \$ (1,819,112) Budget w/Carryforward \$ 304,598 \$ - \$ 172,800 \$ 1,341,714	\$ 714,407  \$ 1,318,018  Actual (As of 12/31/13)  \$ 152,299  \$ - \$ - \$ 177,841 \$ 1,341,714	\$ 689,665 \$ 581,321 LY Actual (As of 12/31/12) \$ - \$ 39,632 \$ 260,243 \$ 336,061	\$ (890,041) \$ 3,137,131 \$ Variance to Budget \$ 152,299 \$ \$ (5,041) \$	\$ 24,742 \$ 736,697 \$ Variance to LY \$ 152,299 \$ - \$ (39,632) \$ (82,402) \$ 1,005,653	45%  -72%  % to Budget  50% 0% 100% 103% 100%	4% 127% % to LY 100% 0% -100% -32% 299%
Total Debt Service  Total - Surplus (Deficit) of revenue over all operating expenditures*  OTHER FINANCING SOURCES  General Fund Subsidy Transfer from Special Revenue Funds Transfer from Insurance Proceeds 2013 Encumbrance Carryforward Voted Use of Certified Retained Earnings  Total Other Financing Source	\$ 1,604,448 \$ (1,819,112) Budget w/Carryforward \$ 304,598 \$ - \$ 172,800 \$ 1,341,714	\$ 714,407 \$ 1,318,018  Actual (As of 12/31/13) \$ 152,299 \$ \$ 177,841 \$ 1,341,714 \$ 1,671,854	\$ 689,665 \$ 581,321 LY Actual (As of 12/31/12) \$ - \$ 39,632 \$ 260,243 \$ 336,061 \$ 635,936	\$ (890,041) \$ 3,137,131 \$ Variance to Budget \$ 152,299 \$ - \$ (5,041) \$ 147,258	\$ 24,742 \$ 736,697 \$ Variance to LY \$ 152,299 \$ - \$ (39,632) \$ (82,402) \$ 1,005,653 \$ 1,035,918	45%  -72%  % to Budget  50% 0% 100% 103% 100%	4% 127% % to LY 100% 0% -100% -32% 299% 163%
Total Debt Service  Total - Surplus (Deficit) of revenue over all operating expenditures*  OTHER FINANCING SOURCES  General Fund Subsidy Transfer from Special Revenue Funds Transfer from Insurance Proceeds 2013 Encumbrance Carryforward Voted Use of Certified Retained Earnings  Total Other Financing Source	\$ 1,604,448 \$ (1,819,112) Budget w/Carryforward \$ 304,598 \$ - \$ 172,800 \$ 1,341,714 \$ 1,819,112	\$ 714,407 \$ 1,318,018  Actual (As of 12/31/13) \$ 152,299 \$ \$ 177,841 \$ 1,341,714 \$ 1,671,854	\$ 689,665 \$ 581,321 LY Actual (As of 12/31/12) \$ - \$ 39,632 \$ 260,243 \$ 336,061 \$ 635,936	\$ (890,041) \$ 3,137,131 \$ Variance to Budget \$ 152,299 \$ - \$ (5,041) \$ 147,258	\$ 24,742 \$ 736,697 \$ Variance to LY \$ 152,299 \$ - \$ (39,632) \$ (82,402) \$ 1,005,653 \$ 1,035,918	45%  -72%  % to Budget  50% 0% 100% 103% 100% 92%	4% 127% % to LY 100% 0% -100% -32% 299% 163%
Total Debt Service  Total - Surplus (Deficit) of revenue over all operating expenditures*  OTHER FINANCING SOURCES  General Fund Subsidy Transfer from Special Revenue Funds Transfer from Insurance Proceeds 2013 Encumbrance Carryforward Voted Use of Certified Retained Earnings  Total Other Financing Source  Surplus (Deficit) of revenue plus other financing sources over expenditures*	\$ 1,604,448 \$ (1,819,112) Budget w/Carryforward \$ 304,598 \$ - \$ 172,800 \$ 1,341,714 \$ 1,819,112	\$ 714,407 \$ 1,318,018  Actual (As of 12/31/13) \$ 152,299 \$ \$ 177,841 \$ 1,341,714 \$ 1,671,854	\$ 689,665 \$ 581,321 LY Actual (As of 12/31/12) \$ - \$ 39,632 \$ 260,243 \$ 336,061 \$ 635,936	\$ (890,041) \$ 3,137,131 \$ Variance to Budget \$ 152,299 \$ - \$ (5,041) \$ 147,258	\$ 24,742 \$ 736,697 \$ Variance to LY \$ 152,299 \$ - \$ (39,632) \$ (82,402) \$ 1,005,653 \$ 1,035,918	45%  -72%  % to Budget  50% 0% 100% 103% 100% 92%	4% 127% % to LY 100% 0% -100% -32% 299% 163%
Total Debt Service  Total - Surplus (Deficit) of revenue over all operating expenditures*  OTHER FINANCING SOURCES  General Fund Subsidy Transfer from Special Revenue Funds Transfer from Insurance Proceeds 2013 Encumbrance Carryforward Voted Use of Certified Retained Earnings  Total Other Financing Source  Surplus (Deficit) of revenue plus other financing sources over expenditures*	\$ 1,604,448 \$ (1,819,112) Budget w/Carryforward \$ 304,598 \$ - \$ 172,800 \$ 1,341,714 \$ 1,819,112	\$ 714,407 \$ 1,318,018  Actual (As of 12/31/13) \$ 152,299 \$ \$ 177,841 \$ 1,341,714 \$ 1,671,854	\$ 689,665 \$ 581,321 LY Actual (As of 12/31/12) \$ - \$ 39,632 \$ 260,243 \$ 336,061 \$ 635,936	\$ (890,041) \$ 3,137,131 \$ Variance to Budget \$ 152,299 \$ - \$ (5,041) \$ 147,258	\$ 24,742 \$ 736,697 \$ Variance to LY \$ 152,299 \$ - \$ (39,632) \$ (82,402) \$ 1,005,653 \$ 1,035,918	45%  -72%  % to Budget  50% 0% 100% 103% 100% 92%	4% 127% % to LY 100% 0% -100% -32% 299% 163%
Total Debt Service  Total - Surplus (Deficit) of revenue over all operating expenditures*  OTHER FINANCING SOURCES  General Fund Subsidy Transfer from Special Revenue Funds Transfer from Insurance Proceeds 2013 Encumbrance Carryforward Voted Use of Certified Retained Earnings  Total Other Financing Source  Surplus (Deficit) of revenue plus other financing sources over expenditures*	Budget w/Carryforward  304,598 172,800 1,341,714 1,819,112	\$ 714,407 \$ 1,318,018  Actual (As of 12/31/13) \$ 152,299 \$ - \$ 177,841 \$ 1,341,714 \$ 1,671,854 \$ 2,989,872	\$ 689,665 \$ 581,321 LY Actual (As of 12/31/12) \$ - \$ 39,632 \$ 260,243 \$ 336,061 \$ 635,936 \$ 1,217,257	\$ (890,041) \$ 3,137,131 \$ Variance to Budget \$ 152,299 \$ - \$ (5,041) \$ 147,258	\$ 24,742 \$ 736,697 \$ Variance to LY \$ 152,299 \$ - \$ (39,632) \$ (82,402) \$ 1,005,653 \$ 1,035,918	45%  -72%  % to Budget  50% 0% 100% 103% 100% 92%	4% 127% % to LY 100% 0% -100% -32% 299% 163%
Total Debt Service  Total - Surplus (Deficit) of revenue over all operating expenditures*  OTHER FINANCING SOURCES  General Fund Subsidy Transfer from Special Revenue Funds Transfer from Insurance Proceeds 2013 Encumbrance Carryforward Voted Use of Certified Retained Earnings  Total Other Financing Source  Surplus (Deficit) of revenue plus other financing sources over expenditures*  BENCHMARKS  % of Debt to Operating Expense Policy	\$ 1,604,448 \$ (1,819,112)  Budget w/Carryforward \$ 304,598 \$ - \$ 172,800 \$ 1,341,714 \$ 1,819,112	\$ 714,407 \$ 1,318,018  Actual (As of 12/31/13) \$ 152,299 \$ - \$ 177,841 \$ 1,341,714 \$ 1,671,854 \$ 2,989,872	\$ 689,665 \$ 581,321 LY Actual (As of 12/31/12) \$ - \$ 39,632 \$ 260,243 \$ 336,061 \$ 635,936 \$ 1,217,257	\$ (890,041) \$ 3,137,131 \$ Variance to Budget \$ 152,299 \$ - \$ (5,041) \$ 147,258	\$ 24,742 \$ 736,697 \$ Variance to LY \$ 152,299 \$ - \$ (39,632) \$ (82,402) \$ 1,005,653 \$ 1,035,918	45%  -72%  % to Budget  50% 0% 100% 103% 100% 92%	4% 127% % to LY 100% 0% -100% -32% 299% 163%
Total Debt Service  Total - Surplus (Deficit) of revenue over all operating expenditures*  OTHER FINANCING SOURCES  General Fund Subsidy Transfer from Special Revenue Funds Transfer from Insurance Proceeds 2013 Encumbrance Carryforward Voted Use of Certified Retained Earnings  Total Other Financing Source  Surplus (Deficit) of revenue plus other financing sources over expenditures*	Budget w/Carryforward  304,598 172,800 1,341,714 1,819,112	\$ 714,407 \$ 1,318,018  Actual (As of 12/31/13) \$ 152,299 \$ - \$ 177,841 \$ 1,341,714 \$ 1,671,854 \$ 2,989,872	\$ 689,665 \$ 581,321 LY Actual (As of 12/31/12) \$ - \$ 39,632 \$ 260,243 \$ 336,061 \$ 635,936 \$ 1,217,257	\$ (890,041) \$ 3,137,131 \$ Variance to Budget \$ 152,299 \$ - \$ (5,041) \$ 147,258	\$ 24,742 \$ 736,697 \$ Variance to LY \$ 152,299 \$ - \$ (39,632) \$ (82,402) \$ 1,005,653 \$ 1,035,918	45%  -72%  % to Budget  50% 0% 100% 103% 100% 92%	4% 127% % to LY 100% 0% -100% -32% 299% 163%
Total - Surplus (Deficit) of revenue over all operating expenditures*  OTHER FINANCING SOURCES  General Fund Subsidy Transfer from Special Revenue Funds Transfer from Insurance Proceeds 2013 Encumbrance Carryforward Voted Use of Certified Retained Earnings  Total Other Financing Source  Surplus (Deficit) of revenue plus other financing sources over expenditures*  BENCHMARKS  % of Debt to Operating Expense Policy % of Actual Debt to Operating Expense	\$ 1,604,448 \$ (1,819,112)  Budget w/Carryforward \$ 304,598 \$ - \$ 172,800 \$ 1,341,714 \$ 1,819,112 \$ -  12% 13%	\$ 714,407  \$ 1,318,018  Actual (As of 12/31/13)  \$ 152,299  \$ - \$ 177,841  \$ 1,341,714  \$ 2,989,872	\$ 689,665 \$ 581,321 LY Actual (As of 12/31/12) \$ - \$ 39,632 \$ 260,243 \$ 336,061 \$ 635,936 \$ 1,217,257	\$ (890,041) \$ 3,137,131 \$ Variance to Budget \$ 152,299 \$ - \$ (5,041) \$ 147,258	\$ 24,742 \$ 736,697 \$ Variance to LY \$ 152,299 \$ - \$ (39,632) \$ (82,402) \$ 1,005,653 \$ 1,035,918	45%  -72%  % to Budget  50% 0% 100% 103% 100% 92%	4% 127% % to LY 100% 0% -100% -32% 299% 163%
Total Debt Service  Total - Surplus (Deficit) of revenue over all operating expenditures*  OTHER FINANCING SOURCES  General Fund Subsidy Transfer from Special Revenue Funds Transfer from Insurance Proceeds 2013 Encumbrance Carryforward Voted Use of Certified Retained Earnings  Total Other Financing Source  Surplus (Deficit) of revenue plus other financing sources over expenditures*  BENCHMARKS	\$ 1,604,448 \$ (1,819,112)  Budget w/Carryforward \$ 304,598 \$ - \$ 172,800 \$ 1,341,714 \$ 1,819,112 \$ -  12% 13% \$ 1,793,038	\$ 714,407 \$ 1,318,018  Actual (As of 12/31/13) \$ 152,299 \$ - \$ 177,841 \$ 1,341,714 \$ 1,671,854 \$ 2,989,872	\$ 689,665 \$ 581,321 LY Actual (As of 12/31/12) \$ - \$ 39,632 \$ 260,243 \$ 336,061 \$ 635,936 \$ 1,217,257	\$ (890,041) \$ 3,137,131 \$ Variance to Budget \$ 152,299 \$ - \$ (5,041) \$ 147,258	\$ 24,742 \$ 736,697 \$ Variance to LY \$ 152,299 \$ - \$ (39,632) \$ (82,402) \$ 1,005,653 \$ 1,035,918	45%  -72%  % to Budget  50% 0% 100% 103% 100% 92%	4% 127% % to LY 100% 0% -100% -32% 299%







- \$

## Town of Nantucket NANTUCKET MEMORIAL AIRPORT

14 Airport Road Nantucket Island, Massachusetts 02554

Thomas M. Rafter, Airport Manager

Phone: (508) 325-5300 Fax: (508) 325-5306



Commissioners
Daniel W. Drake, Chairman
Arthur D. Gasbarro, Vice Chair
David C. Gray, Sr.
Andrea N. Planzer
Jeanette D. Topham

January 24, 2013

Mr. Christopher W. Jenks Director, Cooperative Research Programs Transportation Research Board 500 Fifth Street, NW Washington, DC 20001

RE: ACRP 02-50, "Deriving Benefits from Alternative Aircraft-Taxi Systems"

Dear Mr. Jenks,

The Commissioners of Nantucket Memorial Airport are aware of the efforts of Mr. Noah J. Karberg in his submission to the Airport Cooperative Research Program, and approve of his participation in the proposed research.

Respectfully,

Daniel W. Drake, Chairman

#### **ACRP 02-50 [RFP]**

#### **Deriving Benefits from Alternative Aircraft-Taxi Systems**

Posted Date: 11/26/2013

**Project Data** 

Funds: \$300,000 Contract Time: 18 months

(includes 3 weeks for ACRP review and approval of the Task 1 deliverable, 3 weeks for review and approval of the interim report, and 3 months for review and for contractors

revision of the final deliverables)

**Authorization to Begin** 

Work: 5/31/2014 -- estimated **Staff Responsibility:** Michael R. Salamone

Phone: (202) 334-1268 Email: msalamone@nas.edu

RFP Close Date: 1/28/2014 Fiscal Year: 2014

#### BACKGROUND

As demand for air travel continues to grow, airports are facing increased pressure to reduce their contribution to local air emissions and noise. Moreover, as the price of fuel increases, aircraft operators are driven to consider operational alternatives that reduce fuel consumption cost. By removing the need for aircraft mainengines during the majority of the taxi phase of operation in aircraft movement areas, there may be an overall net benefit for both the airport and aircraft operator. Recently, non-main-engine aircraft-taxi (alternative aircraft-taxi) systems have attracted interest by industry and government research organizations including, among other alternative systems, an electric motor permanently fixed to the aircraft, or an electric tug. While many of these alternatives may provide energy and environmental benefits, their use may introduce potential challenges to aircraft operators, air traffic control, and new demands upon airport infrastructure. Research is needed to develop a comprehensive list of existing and near-term alternative aircraft-taxi systems and evaluate the potential net cost, energy, and environmental benefits of these systems through the consideration of fuel burn, emissions, and noise effects, and to consider the potential future challenges of implementing this technology for aircraft and airport infrastructure.

#### **OBJECTIVE**

The objective of this research is to develop a resource guide for airport practitioners in three sections that includes: (1) Section 1–an introduction to existing and near-term alternative aircraft-taxi systems; (2) Section 2–a compendium of defensible benefits, impacts, and considerations related to each system; and (3) Section 3–a summary and vision to maximize future potential of these systems given anticipated advances in technology, equipage, and infrastructure. The resource guide should be written in terms and context that are relevant, familiar, and understandable to airport operators.

The resource guide shall list the considerations related to each existing and near-term alternative aircraft-taxi system including various criteria essential to each system that may be used in making selection decisions for a

change of practice. Each benefit, impact, or consideration should use a rational, defensible approach and parameters to accurately quantify the cost, energy, and environmental benefits of these systems and compare them to the standard practice of using aircraft main-engines for aircraft-taxi. The resource guide should also address common issues related to alternative aircraft-taxi systems, including but not limited to:

- Available options for using existing and near-term technology/equipment and an evaluation of the pros/cons for airports' understanding.
- Correlation of any known benefits, impacts, and considerations with existing and near-term alternative aircraft-taxi systems to airport operator, aircraft operator, and ground service provider operations.
- Tradeoffs that should be considered and how airports should discuss these systems with aircraft operators and ground service providers.
- Explanations of existing and near-term technology, lessons learned, cost implications, and changes to practice for these systems.
- Operational considerations and infrastructure requirements that are necessary for these systems, relating their cost/benefit to the airport, aircraft operator, and ground service providers.
- Descriptions of each system demonstrating various stakeholder issues and financial implications to aircraft operators and ground service providers such that airports understand their perspective.
- The airport's role and lessons learned, using case studies as a prelude to discussing the options with aircraft operators and ground service providers.
- Approaches to assist any stakeholder in its decision to implement these systems or approve
  implementation by others, and the evaluation criteria that may inform the selection of a particular
  system.
- Airport development projects that would maximize benefits from the systems identified in the resource guide.
- Future technology implications and research/development needs for using alternative aircraft-taxi systems for ground taxi in aircraft movement areas.
- Gaps in current knowledge, practice, or technology that, given further research may offer additional alternatives for possible future consideration.

Accomplishment of the project objective will require the following tasks.

#### **TASKS**

Task descriptions are intended to provide a framework for conducting the research. The ACRP is seeking the insights of proposers on how best to achieve the research objective. Proposers are expected to describe research plans that can realistically be accomplished within the constraints of available funds and contract time. Proposals must present the proposers' current thinking in sufficient detail to demonstrate their understanding of the issues and the soundness of their approach to meeting the research objective.

Task 1. Identify, analyze, describe, and critique pertinent domestic and international research on alternative aircraft-taxi systems in aircraft movement areas, on the basis of applicability, resolution of findings, and usefulness for the analytical needs of this project. Develop a consolidated assessment of industry knowledge and practice of existing and near-term systems. Include known or anticipated advantages or disadvantages to each system, and the benefits, impacts or considerations (i.e., energy, environmental, cost, operations, labor, maintenance, safety, security, regulatory, infrastructure, etc.) that may be included in the Task 3 interim report and ultimately in the resource guide. In addition to any sources suggested by ACRP, identify equipment

suppliers and early implementers (foreign and domestic) for potential interviews and collection of lessons learned, as well as availability of cost, energy, and environmental data for comparison. Suggest interview questions and anticipated data elements for Task 2. Prepare a technical memorandum of Task1 results including an outline for Section 1 and a preliminary list of considerations for Section 2 of the resource guide.

Note: The ACRP will require 3 weeks from the date of submission of the Task 1 technical memorandum for its review and approval. Conduct a conference call with the ACRP project panel to discuss and approve the plan for subsequent tasks.

*Task 2.* Conduct interviews and collect cost, energy, environmental, and other data in accordance with the ACRP project panel-approved Task 1 technical memorandum.

Task 3. Prepare an interim report documenting the findings of Tasks 1 and 2. The interim report should include: (1) an approach and parameters for comparing the cost, energy, and environmental benefits of these systems to the standard practice of using aircraft main-engines for aircraft-taxi; (2) a detailed version of Section 1 of the resource guide; and (3) an outline of Section 2 of the resource guide for each alternative aircraft-taxi system that airport operators should examine as part of a decision/evaluation process. The interim report should describe all anticipated relevant benefits, impacts, and considerations—including any initial considerations from Task 1 technical memorandum as well as any new considerations that may have appeared in Task 2.

Note: The ACRP will require 3 weeks from the date of submission of the interim report for its review and approval. The research agency shall be required to meet with the project panel to obtain ACRP approval before beginning Task 4.

Task 4. Prepare the resource guide, suitable for use by airport operators. The resource guide shall include (1) Section 1–an introduction and overall description of the operation and general benefits of alternative aircraft-taxi systems; (2) Section 2–a comprehensive compendium of existing and near-term systems with a thorough evaluation, list of defensible considerations, and associated challenges of using these systems; and (3) Section 3–a speculative discussion to maximize future potential of these systems, which may require modifications to aircraft, airport infrastructure, or new technologies that are not currently available. In addition, prepare (1) a final report that contains (a) documentation of the entire project, incorporating all other specified deliverable products of the research; (b) an executive summary that outlines the research results; and (c) recommendations of needs and priorities for additional related research and (2) a Microsoft PowerPoint® presentation describing the project background, objective, research method, findings, conclusions, and published results suitable for future webinars or industry presentations.

Note: Proposers are asked to recommend a writing approach and design-format to publish the research material and maximize its usability. Proposers may suggest additional checkpoints and interim deliverables that are thought to be necessary or appropriate. Following receipt of the draft final deliverables, the last 3 months shall be for ACRP review and comment and for research agency preparation of the revised final deliverables.

#### **SPECIAL NOTES**

A. Proposals are evaluated by the ACRP staff and project panels consisting of individuals collectively very knowledgeable in the problem area. Selection of an agency is made by the project panel considering the following factors: (1) the proposer's demonstrated understanding of the problem; (2) the merit of the proposed research approach and experiment design; (3) the experience, qualifications, and objectivity of the research team in the same or closely related problem area; (4) the plan for ensuring application of results; (5) the proposer's plan for participation by Disadvantaged Business Enterprises--small firms owned and controlled by minorities or women; and (6) the adequacy of the facilities.

Note: The proposer's plan for participation by Disadvantaged Business Enterprises should be incorporated in Item 12 of the proposal.

- B. Proposals should include a task-by-task breakdown of labor hours for each staff member as shown in Figure 4 in the brochure, "Information and Instructions for Preparing Proposals" (<a href="http://onlinepubs.trb.org/onlinepubs/crp/docs/ProposalPrep.pdf">http://onlinepubs.trb.org/onlinepubs/crp/docs/ProposalPrep.pdf</a>). Proposals also should include a breakdown of all costs (e.g., wages, indirect costs, travel, materials, and total) for each task using Figures 5 and 6 in the brochure.
- C. ACRP projects are intended to produce results that will be applied in practice, and proposals and the project final report must contain implementation plans for moving the results of the research into practice. Item 4(c), "Anticipated Research Results," in each proposal must include an Implementation Plan that describes activities to promote application of the product of this research. It is expected that the implementation plan will evolve during the project; however, proposals must describe, as a minimum, the following: (a) the "product" expected from the research, (b) the audience or "market" for this product, (c) a realistic assessment of impediments to successful implementation, (d) the institutions and individuals who might take leadership in applying the research product, (e) the activities necessary for successful implementation, and (f) the criteria for judging the progress and consequences of implementation.
- D. Item 5 in the proposal, "Qualifications of the Research Team," must include a section labeled "Disclosure." Information relevant to the ACRP's need to ensure objectivity and to be aware of possible sources of significant financial or organizational conflict of interest in conducting the research must be presented in this section of the proposal. For example, under certain conditions, ownership of the proposing agency, other organizational relationships, or proprietary rights and interests could be perceived as jeopardizing an objective approach to the research effort, and proposers are asked to disclose any such circumstances and to explain how they will be accounted for in this study. If there are no issues related to objectivity, this should be stated.
- E. The project panel may have suggestions for early implementers and data sources (foreign and domestic) to complete Task 2. Proposers may include preliminary suggestions of their own for such sources.

### Proposals (20 single-bound copies) are due not later than 4:30 p.m. on 1/28/2014.

This is a firm deadline, and extensions are not granted. In order to be considered for award, all 20 copies of

the agency's proposal accompanied by the executed, unmodified Liability Statement must be in our offices not later than the deadline shown, or the proposal will be rejected. Proposers may choose any carrier or delivery service for their proposals. However, proposers assume the risk of proposal rejection if the carrier or delivery service does not deliver all the required documents by the deadline.

#### **Delivery Address:**

PROPOSAL-ACRP ATTN: Christopher W. Jenks Director, Cooperative Research Programs Transportation Research Board 500 Fifth Street, NW Washington, DC 20001

#### **Liability Statement**

The signature of an authorized representative of the proposing agency is required on the unaltered statement in order for the ACRP to accept the agency's proposal for consideration. **Proposals submitted without this executed and unaltered statement by the proposal deadline** *will be summarily rejected.* An executed, unaltered statement indicates the agency's intent and ability to execute a contract that includes the provisions in the statement.

Here is a printable version of the <u>Liability Statement (pdf)</u>. A free copy of the Adobe Acrobat PDF reader is available at <a href="http://www.adobe.com">http://www.adobe.com</a>.

#### **General Notes**

- 1. According to the provisions of Title 49, Code of Federal Regulations, Part 21, which relates to nondiscrimination in federally assisted programs, all parties are hereby notified that the contract entered into pursuant to this announcement will be awarded without discrimination on the grounds of race, color, religion, sex, national origin, or disability.
- 2. The essential features required in a proposal for research are detailed in the current brochure entitled "Information and Instructions for Preparing Proposals" (updated November 2010). Proposals must be prepared according to this document, and attention is directed specifically to Section V for mandatory requirements. Proposals that do not conform with these requirements will be rejected. This brochure is available here.
- 3. The total funds available are made known in the project statement, and line items of the budget are examined to determine the reasonableness of the allocation of funds to the various tasks. If the proposed total cost exceeds the funds available, the proposal is rejected.
- 4. All proposals become the property of the Transportation Research Board. Final disposition will be made according to the policies thereof, including the right to reject all proposals.
- 5. Potential proposers should understand that follow-on activities for this project may be carried out through either a contract amendment modifying the scope of work with additional time and funds, or through a new contract (via sole source, full, or restrictive competition).

To create a link to this page, use this URL: <a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3696">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3696</a>

### **ACRP**

02-50

## Deriving Benefits from Alternative Aircraft-Taxi Systems

## TRANSPORTATION RESEARCH BOARD NAS-NRC LIMITED USE DOCUMENT

This proposal is for use of recipient in selection of a researcher to conduct work under the Aircraft Cooperative Research Program. If the proposal is unsuccessful, it is to be returned to the ACRP. Proposals are regarded as fully privileged, and dissemination of the information included therein must be approved by the ACRP.

Noah J. Karberg

#### **SUMMARY PAGE**

#### ACRP 02-50

"Deriving Benefits From Alternative Aircraft-Taxi Systems"

Proposer: Noah J. Karberg

14 Airport Rd.

Nantucket, MA 02554

508-325-7531

Person Submitting Proposal: Noah J. Karberg, Environmental Coordinator

Proposal Written by: Noah J. Karberg, Environmental Coordinator

Proposal Date: January 24, 2014

Principal Investigator: Noah J. Karberg, Environmental Coordinator

14 Airport Rd.

Nantucket, MA 02554

508-325-7531

nkarberg@nantucketairport.com

Administrative Officer: Ms. Ashley Christ, Business Manager

14 Airport Rd.

Nantucket, MA 02554

508-325-5310

achrist@nantucketairport.com

Proposed Contract Period: TBD (NTE 18 months)

Total Contract Amount: TBD (NTE \$300,000)

Proposed Contract Type: Cost-reimbursement

Fixed Fee Portion at \_\_\_ %: n/a

#### Research Plan

- I. Introduction
  - a. Concise overview of approach to conducting research
    - i. Types of alternatives
      - 1. Wheel
      - 2. Tug
    - ii. Differences are in how they are powered
    - iii. Goal is to provide information to evaluate serious implementation of technology
      - 1. Focus on an end product available to users
        - a. Shows options in taxiway routes and savings
        - b. Use existing product infrastructure
      - 2. Collect needed information
        - a. Fuel offset over life of device
        - b. Install costs over a fleet at a high taxiway airport for a big operator
  - b. Manner in which team expertise will be used
    - i. Find and Focus on people who can program AEDT
    - ii. Focus on operational data and industry contact
    - iii. Project manager/researcher writer
  - c. Availability and application of data, facilities, and equipment needed
    - i. AEDT already exists
  - d. Highlight the linkages of the proposed teams capabilities to project tasks
    - Duh
  - e. Address how the proposed plan will satisfy the objectives
    - i. Benefits are airport specific.
- II. Research Approach
  - a. Describe the plans for objective accomplishments
    - i. Describe each phase or task
- III. Anticipated Research Results
  - a. Summary of anticipated products, for example:
    - i. Design techniques
    - ii. Mathematical Models
    - iii. Test procedures
    - iv. Guidelines for recommended practice
  - b. Description of product applicability to improving current practice(s)
  - c. Implementation Plan
    - i. Initial thoughts on activities to promote the implementation plan
      - 1. Audience, and/or
      - 2. Market
    - ii. Assessment of impediments to implementation
    - iii. Future activities necessary for successful implementation
    - iv. Criteria for judging the progress and consequences of implementation
    - v. If applicable: recommendations for additional work to reach implementation stage

#### Additional or first comments on keys for the Master Plan -Working Group members

November 25, 2013

#### 1. Bob Egan, Nantucket Flying Assn.

I believe the NFA would like to see a much greater emphasis on General Aviation as it relates to seasonal and year round residents. Working with the recently resurrected Natucket Flying Association in its attempts to introduce "air and space" into the local school curriculum is an area of focus for NFA and would be enhanced by a collaborative effort by the airport, NFA and many others. Having a flight school with a "clubhouse" on the field would go a long way toward promoting GA on Nantucket. Thanks. Bob Egan

#### 2. Arthur Gasbarro, Airport Commission

A few thoughts as a follow-up to the meeting.

The fiscal analysis and rates/charges study should incorporate the need to payback the Town. I would like to see an analysis of a seven-year payback plan starting in FY16. The rate/charge increases should be implemented before the end of this fiscal year so as to be accepted by DOR in the FY16 Budget.

The website needs to be populated with more information, then heavily advertised. The existence was announced at the August Open House. http://masterplan.nantucketairport.com/

Solar - Focus on the analysis of suitability of strip array along the easterly boundary (as shown as a red line on the current ALP). Also roof/hangar opportunities. It should be a behind the meter installation to defray onsite energy use.

Examine Electric Vehicles as fleet replacements, including for suitable maintenance equipment.

#### 3, Sam Bailey

My thoughts about financing projects was that if a project costs \$1 million and federal government pays 90% but the town or airport must prepay an amount before getting reimbursed and must borrow the money and pay interest the financing costs should be included in the total budget figure. If the federal government won't pay its share of financing the budget should show that the town's or airport's share is the 10% plus the interest costs. My telephone number is 860-677-8578. When on island we live at 11 Mill Street in town and the number is 508-228-4278. I have a T hanger at the airport and am usually on island from mid-June to mid-October. I also fly out at other times during the year. My business is called SBailey & Associates. We have built a number of houses on the island but have no projects at present. Sam Bailey

#### 4. Andrew Vorce

There were two roads I had hoped to mention, the first one below I am sure I discussed:

Maddequecham Valley Road runs down the eastern and southern boundary of the Airport. It is outside of the legal layout on the east and not properly laid out to the south. Abutters use it for access but it doesn't count for frontage. Maintenance was handled by the Airport in the past and maybe currently. I think this is the most relevant as it is on Airport property. I was working on this issue with a former Airport Commissioner until he left.

Converting a series of roadways from private to public along the western boundary is also a priority-they are Boulevarde, Lovers Lane, Okorwaw Avenue and Monohansett Road. Stitched together they provide a less congested access to the airport from the south.

#### Additional or first comments on keys for the Master Plan -Airport Staff

1. Noah Karberg

Hello all,

Something I would have spoken to had time permitted, for inclusion in working group comments:

"I know we reviewed a broad scope of how the Airport, Town and the FAA all operate, in addition to the role of the working group and Master Planning process. It is easy for me as Environmental Coordinator to invoke the "web of regulations", especially since my background is in understanding the interconnectedness of seemingly different aspects of nature. However, I want to emphasize that working in and with an Airport, Nantucket Memorial especially, involves understanding how a broad swath of factors influence daily operations."

"For example, addressing airport-community noise issues is important for all members of the working group. But it does not exist in isolation to other the aspects of running the Airport – financial, regulatory, environmental, safety and operational. My schoolteacher friends run an exercise where all the children stand in a circle and toss a ball of yarn from one child to another, holding on the each piece until the skein is played out. One child (Timmy - a frog), pulls on his strings, and the other children can literally feel how a frog relates to a tree (Karen), a mosquito, a salamander, etc."

"The Airport is very much the same way. The dynamic nature of the interrelationships of the various parts allows for change, either hierarchical from within, or organic from community members and stakeholders. But one must not tug on their own string too hard unless they full understand, and can plan for, how a change will effect the connectedness to all other aspects.



### Nantucket Memorial Airport Draft Mission Statement

November 12, 2013

"The mission of the Nantucket Memorial Airport (ACK) is to provide operationally safe, environmentally responsible, and economically sustainable air service to the residents, businesses, and visitors to the Island of Nantucket."



### **DRAFT**

# Meeting Summary

#### Nantucket Memorial Airport Master Plan

Working Group meeting, November 12, 2013, 2:30 p.m. • Public Safety Facility Attendees: See page 5.

#### Welcome

<u>Dan Drake</u>, Airport Commission chair, opened the meeting. The master planning process is critical to developing a realistic master plan with implementable projects that benefit the airport, users, and the Town.

#### Welcome and Background

Tom Rafter, Airport manager, described the airport master planning process. Every airport seeking FAA grants is required to prepare a master plan every 5–10 years and become part of the National Plan of Integrated Airport Systems. FAA defines the minimum master plan elements and approves two of the twelve + elements—the Airport Layout Plan (ALP) and Forecasts of Demand. If master plan forecasts differ from the FAA's Terminal Area Forecast, the difference must be explained. The Working Group (WG) is an important part of the public participation program for the master plan. We will rely on WG members to participate in meetings; take back information to your organizations, neighbors, etc.; and bring information to the WG from others.

Airport master plans vary depending on the issues. ACK's master plan will have at least three unique focus areas: financial plan, alternatives analysis, and public outreach. The fact the airport is on an island requires unique approaches to several master plan elements.

#### **Introductions and Review of Working Group Role**

Anne McKinnon, Jacobs Engineering Group, prime master plan consultant, led introductions. The Working Group has broad representation: representatives from neighborhood and civic organizations; three residents; two airlines; a business at the airport, chamber of commerce; environmental group; non-profit organization; the Town; and airport staff and commission. Members' tenure living, visiting, or working on the island ranges from 3 months to 62 years with an average of 29.8 years.

McKinnon proposed a plan for WG operations. Meetings start and end on time. The WG is intended to be an informal group that encourages an exchange of information and a conversation about issues. WG meetings are open to the public. Feel free to ask questions during the presentation if the answer will help follow the presentation. All meetings will have a Q & A/discussion period for in-depth discussion. Meeting summaries will be prepared to capture key discussions, action items, areas of agreement, and things to work on. Meeting summaries will be sent to WG members and posted on the new Airport Master Plan web page (http://masterplan.nantucketairport.com/). Tom Quigley, Surfside Assn., asked how the WG would communicate with the team between meetings. Rafter said the new webpage will have an e-mail posting system on the web page to make it easy to communicate with staff about the master plan. Note: the form on the webpage may be used, but it involves filling in many fields which are needed to get information from a member of the public. WG members might find it quicker to send communications directly to Tom Rafter and Janine Torres (trafter@nantucketairport.com and jtorres@nantucketairport.com).



Role of Working Group: <u>McKinnon</u> said the Working Group's role is to advise the Airport Commission and staff and to give feedback from the groups they represent. The Airport Commission is responsible for approving the master plan and will make decisions necessary to complete the document. She said the WG will not vote. <u>Andrew Vorce</u>, Nantucket planning director, asked how issues about which there was disagreement would be handled. "Minority" opinions will be recorded, and the Commission will be responsible for understanding the different viewpoints.

#### Overview of Master Plan and Schedule

<u>Bill Richardson</u>, Jacobs, reviewed the master plan team and "client team" (FAA and MassDOT) roles. He reviewed the schedule which is prescribed by FAA regulations. To date, work has focused on existing conditions data collection and analysis. Forecasts and alternatives will be developed this winter and reviewed at the WG meeting in late January or early February 2014.

#### **Recent Airport Projects and Updates**

#### **Recent Projects-Completed**

- New ARFF building and Terminal building.
- Runway 33 extension 500' south. Allows more over-water landings. 97% federal- and state-funded.
- New Taxiway J enhances operational flexibility and safety.
- Gravel parking lot (107 spaces) accommodates seasonal rental car overflow.
- New FBO/Airport Administration building provides major improvement for flight crews.
- Electric vehicle charging stations.
- Geothermal HVAC for terminal.`

#### **Recent Projects-Current**

- Runway Safety Area Runway 12-30; now addressing elevation differences in both sides of runway.
- Airport carbon-neutral sustainability project with MassDOT Aeronautics/Volpe Center.

<u>Richardson</u> said airfield projects such as the runway extension are funded 95%–97% using federal-state funds. Others are funded 80% using state funds. Only a small percent of local funds (3%) is typically needed for major airfield projects. Projects such as the terminal and the FBO required significantly higher state and local shares.

#### **Existing Conditions Review**

<u>Tom Rafter</u> described the **Airport Layout Plan (ALP)** (slide 18), one of two master plan elements FAA must approve. Although electronic ALPs (eALP), which use digital aerial photography and survey to collect data, are now being required by FAA, this master plan will not develop an eALP. In the previous ALP, future aviation-related development (shown in yellow) included storage hangars, the bunker area, solar panels, and more. ALP projects must go through environmental review and permitting.

Noah Karberg, Airport Environmental Coordinator, reviewed **environmental and sustainability initiatives** (slides 19 & 20) including geothermal heating and cooling; study of solar; electric vehicle charging station at Hangar 2, and being selected by MassDOT to become the first carbon-neutral airport in the US. The airport is the third biggest land owner on the island and its ecological management plan helps guide best practices for habitat management. Under consideration is a habitat-enhancement program to coordinate all Town projects.

Steve Berardo, Jacobs, reviewed aviation activity trends (slides 21-23). Thirteen years of data were studied to determine who's using ACK. Aircraft operations were down 22% between 2000 and 2012. General Aviation traffic was also down significantly. Air taxi operations (Cape Air, Island Airlines, air taxis, NetJets) are down 26% but still represent the majority of commercial operations. Passenger enplanements go in cycles and consist of about five types of users: second homeowner, short-term visitor, seasonal worker, year-round resident, and day worker. Primary users of corporate jets—including air taxis—are second homeowners.



<u>Berardo</u> described characteristics of **year-round air service** at ACK as very short haul and competing with growing ferry service. These air services follow Federal Aviation Regulations (FAR) Part 135 for air taxi operations. <u>Quigley</u> requested the ferry-service traffic be added to slide 23, passenger enplanements. Yes. <u>Berardo</u> said fuel type (100LL avgas) and cost created a question mark surrounding the future of the C-402 and how that could affect Cape Air and Island Airlines.

Seasonal air service at ACK makes mainline connections using bigger planes than year-round air service. Berardo said seasonal service typically does not compete with ferry service. These services follow Federal Aviation Regulations (FAR) Part 121 for scheduled air service. Fewer 50-seat Regional Jets are coming to ACK. A question about this service is how airline consolidation will affect the number of flights at ACK. Quigley asked if Cape Air could step in where the Regionals are leaving. Berardo said Cape Air is governed by FAR Part 135 (nine seats or fewer), and FAR Part 121 is more costly. He said Cape Air has interline agreements with other airlines that provide coordinated schedules. Berardo said larger aircraft with big wing spans are an issue at ACK. Quigley asked if corporate air taxi activity (e.g. NetJets) had declined 2008-2010. Yes, and fractional ownership programs really took a hit. Overall corporate traffic has not rebounded to 2006-2007 levels. Berardo noted the corporate market on Nantucket was mature, and because not much new island development is anticipated, growth in the corporate aircraft market is not likely.

#### **Next Steps/Milestones/Schedule**

<u>Richardson</u> said the team is working on trends, forecasts and fleet mix, facility needs and alternative concepts and will present findings for review at a WG meeting in late January or early February. Advance notice of the meetings—about three weeks—will be given.

<u>Quigley</u> asked how issues of concern to the community are incorporated and addressed, such as noise, impacts of changing aircraft size, etc. Security screening for GA may soon be required—how with ACK address that? <u>Rafter</u> said GA security screening is probably distant and will be addressed in a future master plan. The public meetings and WG meetings will bring community issues to the team which will be considered and addressed. Some may be addressed in the master plan, some may be addressed separately, and some may be deferred.

#### O & A/Discussion

<u>Arthur Gasbarro</u> said the alternative concepts must be informed by finances, and a Capital Improvement Program (CIP) that includes all master plan projects proposed must be tied to the alternatives. "Wants" and "needs" at the airport should be distinguished—one doesn't build a church exclusively for Easter Sunday. <u>Rafter</u> concurred. The master plan requires identifying if the airport can afford projects or not and how projects will be financed. <u>Drake</u> said the airport will not undertake a capital project without knowing how it will be paid for. <u>Rafter</u> noted FAA requires rates and charges to be structured toward self-sufficiency. The master plan will benchmark ACK against other airports on a variety of issues such as incentive programs.

<u>Carol Dunton</u> requested material be sent to WG members in advance of meetings. Yes. She asked for data on ferry use and fare information for air travel and ferry travel. Yes.

<u>Sam Bailey</u> commented the 100LL avgas issue has been alive with no resolution in sight for a while. He said if a project costs \$1 million and federal government pays 90%, and if the town or airport must borrow the money and pay interest the financing costs while waiting for reimbursement, then these expenses should be included in the total budget figure. If the federal government won't pay its share of financing, the budget should show that the town's or airport's share is the 10% plus the interest costs.

<u>Andrew Vorce</u> said key issues for the master plan are land use and transportation. The Town is working on rezoning some areas around the airport. Maddequecham Valley Road is on Airport property and was once maintained by the airport. A series of private roadways could be converted to public along the western boundary (Boulevarde, Lovers Lane, Okorwaw Avenue and Monohansett Road) to provide access to the airport. What is



the plan for the Delta Fields? He said working on transportation with the airport along with surrounding development in a comprehensive way could yield transit, pedestrian and bicycle improvements.

<u>Ernest Steinauer</u> said environmental issues were not discussed much today. Protection of rare species may conflict with airport plans, but the situation seems to be changing and must be a consideration.

<u>Quigley</u> commented on air traffic trends and mused about what it could mean if the trends continue. He concurred wants/needs must be clearly identified, and implored the team to pay close attention to the surrounding community's issues.

<u>Allen Reinhard</u> contributed the next day: ACK is a lifeline for residents and business. "Customer experience" in the broad sense and intimate sense at ACK must be good so people will continue to choose to fly. A choice of flights and having enough room in the terminal are some things needed to keep people flying and off the ferry.

<u>Leslie Johnson</u> said as the island changes, balancing needs and desires becomes more important. Year-round residents shouldn't always accommodate the summer influx; bigger is not always better. Quality of life issues for year-round residents need to be considered.

<u>P.J. Martin Smith</u> commented on the trends and the competition from ferry services. Chamber data show most visitors are coming from the New York City metro area and these visitors need to be accommodated.

<u>Peter Farrell</u> said the 100LL avgas issue seems immutable and options for 402 replacements can be discussed, but Cape Air will keep using the 402s.

<u>Bob Egan</u> contributed this by e-mail: NFA would like to see a much greater emphasis on General Aviation as it relates to seasonal and year-round residents. Nantucket Flying Association is working to introduce "air and space" into the local school curriculum and would be enhanced by a collaborative effort by the airport, NFA and many others. A flight school with "clubhouse" on the field would go a long way toward promoting GA on ACK.

Arthur Gasbarro added this by e-mail: The fiscal analysis and rates/charges study should incorporate the need to payback the Town. Include an analysis of a seven-year payback plan starting in FY16. The rate/charge increases should be implemented before the end of FY14 so as to be accepted by DOR in the FY16 Budget. Promote the new website when it has more information. Focus on the analysis of suitability of solar strip array along the easterly boundary (as shown as a red line on the current ALP). Also roof/hangar opportunities. It should be a behind the meter installation to defray onsite energy use. Examine electric vehicles as fleet replacements, including for suitable maintenance equipment.

#### Action Items

- Working Group operations
  - a. Meeting notices will be sent three weeks in advance.
  - b. Whenever possible, meeting materials will be sent in advance.
  - c. Communication between WG meetings is encouraged. E-mail Tom Rafter and Janine Torres.
- 2. Data needed
  - a. Ferry boardings
  - b. Ferry and airplane fares
  - c. Provide analysis of the seven-year Town payback plan starting in FY16
- 3. Additional Issues for consideration in Master Plan
  - a. Coordinating transportation opportunities with the Town
  - b. Maddeguecham Valley and network of private roads
  - c. Delta Fields plan
  - d. Quality of life issues in communities surrounding airport
  - e. Greater emphasis on General Aviation; flight school
  - f. Protection of rare species

The meeting adjourned at 4:34 p.m. If your recollection of the meeting is different, please let Janine Torres know as soon as possible (<u>itorres@nantucketairport.com</u>).



## Nantucket Airport Master Plan Working Group meeting 11/12/13 Attendees

<u>Name</u>		<u>Organization</u>
Diane	Archer	resident *
Steven	Berardo	Jacobs Engineering
Sam	Bailey	Airport business
Armando	Cardenas	Island Airlines, LLC *
Dan	Drake	Chair, Nantucket Airport Commission
Carol	Dunton	resident
Bob	Egan	Nantucket Flying Association *
Peter	Farrell	Cape Air *
Arthur	Gasbarro	Vice chair, Nantucket Airport Commission
Leslie	Johnson	resident
Noah	Karberg	Airport Environmental Coordinator
Anne	McKinnon	Jacobs Engineering
Tom	Quigley	Surfside Association
Tom	Rafter	Manager, Nantucket Airport
Allen	Reinhard	Nantucket Civic League
Bill	Richardson	Jacobs Engineering
P.J.	Martin Smith	Director, Nantucket Chamber of Commerce
Ernest	Steinauer	Mass. Audubon Society
David	Sylvia	Compliance Officer, Nantucket Airport
Andrew	Vorce	Director of Planning, Town of Nantucket

Working Group members shown in **bold** \* participated by telephone or video call



### Nantucket Memorial Airport Draft Mission Statement

November 12, 2013

"The mission of the Nantucket Memorial Airport (ACK) is to provide operationally safe, environmentally responsible, and economically sustainable air service to the residents, businesses, and visitors to the Island of Nantucket."

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Examine Electric Vehicles as fleet replacements, including for suitable maintenance equipment.

#### 3, Sam Bailey

My thoughts about financing projects was that if a project costs \$1 million and federal government pays 90% but the town or airport must prepay an amount before getting reimbursed and must borrow the money and pay interest the financing costs should be included in the total budget figure. If the federal government won't pay its share of financing the budget should show that the town's or airport's share is the 10% plus the interest costs. My telephone number is 860-677-8578. When on island we live at 11 Mill Street in town and the number is 508-228-4278. I have a T hanger at the airport and am usually on island from mid-June to mid-October. I also fly out at other times during the year. My business is called SBailey & Associates. We have built a number of houses on the island but have no projects at present. Sam Bailey

#### 4. Andrew Vorce

There were two roads I had hoped to mention, the first one below I am sure I discussed:

Maddequecham Valley Road runs down the eastern and southern boundary of the Airport. It is outside of the legal layout on the east and not properly laid out to the south. Abutters use it for access but it doesn't count for frontage. Maintenance was handled by the Airport in the past and maybe currently. I think this is the most relevant as it is on Airport property. I was working on this issue with a former Airport Commissioner until he left.

Converting a series of roadways from private to public along the western boundary is also a priority-they are Boulevarde, Lovers Lane, Okorwaw Avenue and Monohansett Road. Stitched together they provide a less congested access to the airport from the south.

#### Additional or first comments on keys for the Master Plan -Airport Staff

1. Noah Karberg

Hello all,

Something I would have spoken to had time permitted, for inclusion in working group comments:

"I know we reviewed a broad scope of how the Airport, Town and the FAA all operate, in addition to the role of the working group and Master Planning process. It is easy for me as Environmental Coordinator to invoke the "web of regulations", especially since my background is in understanding the interconnectedness of seemingly different aspects of nature. However, I want to emphasize that working in and with an Airport, Nantucket Memorial especially, involves understanding how a broad swath of factors influence daily operations."

"For example, addressing airport-community noise issues is important for all members of the working group. But it does not exist in isolation to other the aspects of running the Airport – financial, regulatory, environmental, safety and operational. My schoolteacher friends run an exercise where all the children stand in a circle and toss a ball of yarn from one child to another, holding on the each piece until the skein is played out. One child (Timmy - a frog), pulls on his strings, and the other children can literally feel how a frog relates to a tree (Karen), a mosquito, a salamander, etc."

"The Airport is very much the same way. The dynamic nature of the interrelationships of the various parts allows for change, either hierarchical from within, or organic from community members and stakeholders. But one must not tug on their own string too hard unless they full understand, and can plan for, how a change will effect the connectedness to all other aspects.

Working Group Comments

From:

Allen Reinhard <allenreinhard@yahoo.com>

Sent:

Tuesday, January 07, 2014 2:39 PM

To:

Janine Torres

Subject:

Re: Airport Master Plan Working Group

Janine,

I think the meeting summary and Mission Statement are complete, accurate and well written. The detailed summary is especially helpful for remembering issues and details discussed. The Mission Statement is simple, clear and direct.

Regarding dates, I serve on several commissions that have pretty regular scheduled meetings. I will list the days each month I have scheduled meetings and am not available. Most any other days and times of the month will work.

Mon., Feb. 3rd Meetings at 4:00 and 6:30

Tue., Feb. 11 Meeting at 4:00 Wed. Feb. 12 Meeting at 3:00

Mon. Feb.

17 Meeting at 6:30

Tue.

Feb.18 Meeting at 4:00

Tue. Feb 25 Meeting at 4:00

Hope this is helpful.

Allen Reinhard

From: Janine Torres < jtorres@nantucketairport.com>

**To:** 'Allen Reinhard' <allenreinhard@yahoo.com>; 'Andrew Vorce' <avorce@nantucket-ma.gov>; Armando Cardenas <acardenas@islandair.net>; 'Arthur Gasbarro' <arthurg3@comcast.net>; 'Bob Egan' <br/>bob.egan@egansign.com>; 'Carol Dunton' <caroldunton@comcast.net>; 'Dave Sylvia' <dsylvia@nantucketairport.com>; 'Diane Archer'

<darcher@ourfuture.org>; 'Ernest Steinauer' <esteinauer@massaudubon.org>; 'Leslie Johnson'

<lesliebrooksj@comcast.net>; 'Peter Farrell' <peter.farrell@capeair.com>; 'PJ Martin Smith'

<director@nantucketchamber.org>; Sam Bailey <samIbailey@gmail.com>; 'Tom Quigley' <tquigley2@aol.com>; 'Tom Rafter' <trafter@nantucketairport.com>

Cc: "McKinnon, Anne" < Anne. McKinnon@jacobs.com>

Sent: Monday, January 6, 2014 2:55 PM Subject: Airport Master Plan Working Group

#### Hi All,

If you haven't already done so, please forward your comments on;

- 1. the Meeting Summary and draft Mission Statement (comment period ends today). Documents attached again for ease of reference.
- 2. Dates you are available in February.

Thanks and Happy New Year!

Janine M. Torres
Office Manager
Nantucket Memorial Airport
14 Airport Rd, Unit 1
Nantucket, MA 02554
(508) 325-5303 Phone
(508)-325-5306 Fax

From:

Tom Quigley <tquigley2@aol.com>

Sent:

Monday, January 06, 2014 3:13 PM

To:

jtorres@nantucketairport.com; allenreinhard@yahoo.com; avorce@nantucket-ma.gov;

acardenas@islandair.net; arthurg3@comcast.net; bob.egan@egansign.com; caroldunton@comcast.net; dsylvia@nantucketairport.com; darcher@ourfuture.org;

esteinauer@massaudubon.org; lesliebrooksj@comcast.net; peter.farrell@capeair.com; director@nantucketchamber.org; samlbai!ey@gmail.com; trafter@nantucketairport.com

Cc:

Anne.McKinnon@jacobs.com

Subject:

Re: Airport Master Plan Working Group

Janine,

After some thought and input from others, perhaps we should consider additional language to the Mission Statement to respond to the impact such service brings to the Community such as Traffic, Noise, Odors, and Lighting.

My Thoughts below in RED.

"The mission of the Nantucket Memorial Airport (ACK) is to provide operationally safe, environmentally responsible, and economically sustainable air service to the residents, businesses, and visitors to the Island of Nantucket, and to respond to the impact to the Community such service brings.

Tom

Tom Quigley

tquigley2@aol.com

203-470-6509 cell

----Original Message-----

From: Janine Torres <itorres@nantucketairport.com>

To: 'Allen Reinhard' <allenreinhard@yahoo.com>; 'Andrew Vorce' <avorce@nantucket-ma.gov>; Armando Cardenas <acardenas@islandair.net>; 'Arthur Gasbarro' <arthurg3@comcast.net>; 'Bob Egan' <box Egan' <br/>
- Span' <br/>
- Span'

From: Janine Torres <jtorres@nantucketairport.com>

Sent: Monday, January 06, 2014 8:59 AM

To: 'McKinnon, Anne'
Cc: 'Tom Rafter'

**Subject:** FW: Comment on draft mission statement

From: Tom Quigley [mailto:tquigley2@aol.com]
Sent: Saturday, January 04, 2014 10:34 AM

To: darcher@ourfuture.org

Cc: jtorres@nantucketairport.com

Subject: Re: Comment on draft mission statement

#### Diane,

The idea is great but the implementation might be difficult. On first glance, the "Mission Statement" of the ACK Airport most likely comes from the Airport Commission, and any changes would come from them. The inclusion in the Mission Statement of the impact the Airport makes on the Community whether noise, odor, light, or other would be a beneficial change. The wording will require some debate, but worth the effort.

#### Tom

Tom Quigley tquigley2@aol.com 203-470-6509 cell

----Original Message-----

From: Diane Archer <a href="mailto:darcher@ourfuture.org">darcher@ourfuture.org</a>

To: Tom Quigley <a href="mailto:tom">tquigley2@aol.com</a>; Anne McKinnon <a href="mailto:Anne.McKinnon@jacobs.com">tom</a> > Anne.McKinnon@jacobs.com

Cc: Janine Torres <itorres@nantucketairport.com>

Sent: Thu, Jan 2, 2014 1:49 am

Subject: Comment on draft mission statement

Dear Tom and Anne, I wondered whether we might consider revising the draft mission statement to include "noise impact' concerns, perhaps in this way:

"The mission of the Nantucket Memorial Airport (ACK) is to provide operationally safe, environmentally responsible, and economically sustainable air service to the residents, businesses, and visitors to the Island of Nantucket, while minimizing the noise impact on the island."

Diane Archer 917-892-6216

On Dec 20, 2013, at 10:26 PM, Tom Quigley < tquigley2@aol.com > wrote:

Janine,

Good summery of our November 12 Meeting of the Work Group. The Action Items on page 4 are clearly stated and I hope some progress on them is made by our next meeting. I have no additions or retractions.

FYI... I will be available from February 4-27. I will be out of town during the last week of January.

From:

Diane Archer <darcher@ourfuture.org>

Sent:

Thursday, January 02, 2014 1:37 AM

To:

Tom Quigley; Anne McKinnon

Cc:

Janine Torres

Subject:

Comment on draft mission statement

Dear Tom and Anne, I wondered whether we might consider revising the draft mission statement to include "noise impact' concerns, perhaps in this way:

"The mission of the Nantucket Memorial Airport (ACK) is to provide operationally safe, environmentally responsible, and economically sustainable air service to the residents, businesses, and visitors to the Island of Nantucket, while minimizing the noise impact on the island."

Diane Archer 917-892-6216

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Janine,

Good summery of our November 12 Meeting of the Work Group. The Action Items on page 4 are clearly stated and I hope some progress on them is made by our next meeting. I have no additions or retractions.

FYI... I will be available from February 4-27. I will be out of town during the last week of January.

Thanks and Happy Holidays......

Tom

Tom Quigley tquigley2@aol.com 1-203-470-6509

----Original Message-----

From: Janine Torres < itorres@nantucketairport.com >

To: 'Allen Reinhard' <a linear einhard@yahoo.com >; 'Andrew Vorce' <a li>avorce@nantucket-ma.gov >; 'Arthur Gasbarro' <a li>arthurg3@comcast.net >; 'Bob Egan'</a>

<br/><br/>bob egan@egansign.com>; 'Carol Dunton' <caroldunton@comcast.net>; 'Dave Sylvia'

<trafter@nantucketairport.com>

Cc: 'Tom Rafter' < <a href="mailto:trafter@nantucketairport.com">trafter@nantucketairport.com</a>; 'McKinnon, Anne' < <a href="mailto:Anne.McKinnon@jacobs.com">Anne <a href="mailto:Anne.McKinnon@jacobs.com">McKinnon@jacobs.com</a>>

<sup>&</sup>lt;esteinauer@massaudubon.org>; 'Leslie Johnson' <lesliebrooksj@comcast.net>; 'Peter Farrell'

<sup>&</sup>lt;peter.farrell@capeair.com>; 'PJ Martin Smith' <director@nantucketchamber.org>; Sam Bailey

<sup>&</sup>lt;sambailey@gmail.com>; 'Tom Quigley' <tquigley2@aol.com>; 'Tom Rafter'

From:

Janine Torres < jtorres@nantucketairport.com>

Sent:

Thursday, December 19, 2013 8:31 AM

To:

'McKinnon, Anne'

Subject:

FW: draft Working Group summary for review

From: P. J. Martin Smith [mailto:director@nantucketchamber.org]

Sent: Wednesday, December 18, 2013 4:14 PM

To: Janine Torres

Subject: RE: draft Working Group summary for review

This look good to me!

P.J. Martin Smith
Executive Director
Nantucket Island Chamber of Commerce
Zero Main Street, 2nd Floor
Nantucket, MA 02554
508-228-3643

The Nantucket Island Chamber of Commerce is neither a member of or affiliated with the US Chamber of Commerce

From: Janine Torres [mailto:jtorres@nantucketairport.com]

Sent: Wednesday, December 18, 2013 2:30 PM

**To:** 'Allen Reinhard'; 'Andrew Vorce'; Armando Cardenas; 'Arthur Gasbarro'; 'Bob Egan'; 'Carol Dunton'; 'Dave Sylvia'; 'Diane Archer'; 'Ernest Steinauer'; 'Leslie Johnson'; 'Peter Farrell'; P. J. Martin Smith; Sam Bailey; 'Tom Quigley'; 'Tom Rafter'

**Cc:** 'Tom Rafter'; 'McKinnon, Anne'; 'Richardson, Bill' **Subject:** FW: draft Working Group summary for review

All.

My sincere apologies for forwarding this a week late. I have been pre-occupied with the move into our new building and this fell through the cracks.

Please see below for instructions. I hope the deadline of December 20th can be extended a few days.

#### Janine M. Torres

Office Manager

Nantucket Memorial Airport

14 Airport Rd, Unit 1 Nantucket, MA 02554 (508) 325-5303 Phone (508)-325-5306 Fax (508) 901-0726 Cell

From: McKinnon, Anne [mailto:Anne.McKinnon@jacobs.com]

Sent: Wednesday, December 11, 2013 4:46 PM



#### Andrew W. Bonney

Senior Vice President of Planning 660 Barnstable Rd., Hyannis, MA 02601 Direct: 508 862-9719 Fax: 508 862-9791 Email: andrew.bonney@capeair.com

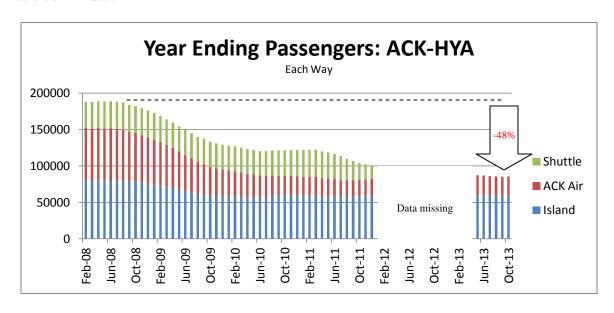
Tom Rafter Nantucket Airport Manager 14 Airport Rd Nantucket, MA 02554

December 30, 2013

Dear Mr. Rafter,

Thank you for the opportunity to comment on the Nantucket Memorial Airport's proposed Passenger Facility Charge (PFC). As you know, Cape Air/Nantucket Airlines is the largest airline on Nantucket, enplaning 37% of Nantucket's passengers in the year-to-date October 2013 period (source: Nantucket Airport website). We have provided year-round service to Nantucket for more than 25 years.

We understand that Nantucket Airport needs to generate incremental revenue to pay down debt from the terminal renovation project completed last decade ("Project 1"). Further, we understand the Airport Commission's desire to widen the south apron taxiway connector ("Project 2"). However, we hope the commission will proceed carefully with imposing a new ticket tax in what has become a fragile air market. Enplanements since 2008 on the single largest market, between Nantucket and Hyannis, are down 48%.





#### Andrew W. Bonney

Senior Vice President of Planning 660 Barnstable Rd., Hyannis, MA 02601 Direct: 508 862-9719 Fax: 508 862-9791 Email: andrew.bonney@capeair.com

This market is fare-sensitive and competes with robust ferry service.

#### PFC magnitude

Cape Air's average net fare in the Hyannis – Nantucket market--Nantucket's largest air market by passengers--is about \$50 each way. The proposed PFC of \$4.50 would be a 9% surcharge on a one-way fare (4.5% averaged across a round trip). Given the recent decline in ridership, and the availability of substitute transportation (ferries), we are concerned that imposition of the \$4.50 PFC as proposed will make air transportation so expensive that it would materially harm Cape Air's ability to provide frequent, convenient, year-round service in this important market.

#### **Project 2: misalignment of taxation and benefit**

We also note that Project 2, taxiway widening, would be of little benefit to Cape Air's Cessna aircraft. Therefore, we suggest that the Airport Commission raise revenue for that project from a progressive weight-based landing fee, rather than a per-head PFC. This would ensure that the heavier aircraft would be the ones paying for the infrastructure that they alone require.

#### **Conclusion and recommendation**

andrew W. Bonney

In an effort not to shock the low-fare, fragile Hyannis – Nantucket market and to better align revenue for and benefits of Project 2 we suggest the Nantucket Airport Commission reduce the proposed PFC to \$2.00 per enplanement (the level of the Barnstable Municipal Airport PFC) and make up the difference in revenue from a progressive landing fee on aircraft over 12,500 lbs MGTOW. With whatever PFC regime is imposed, we recommend that the airport phase it in gradually over time.

Respectfully,



Nantucket Memorial Airport 14 Airport Rd, Unit 1 Nantucket, MA 02554

12/31/13

This letter is in response to the Nantucket Airport PFC notification. Island Airlines would like to voice concern with the addition of a \$4.50 PFC on the short haul market. As a small community airline servicing the Nantucket market the additional fee would represent a 9% increase. Such an increase is disproportionate to the market and may lead to a further decrease in ridership and drive passengers to the boat.

We urge the commission to reference the PowerPoint slides provided at the 12/3/13 meeting by Andrew Bonney. The slides noted a current 42% decline in ridership at Nantucket Memorial Airport, including a 48% decrease in short haul ridership. The additional fare fee will surely have an impact.

Regards,

Cheryl CaraDonna Chief Financial Officer

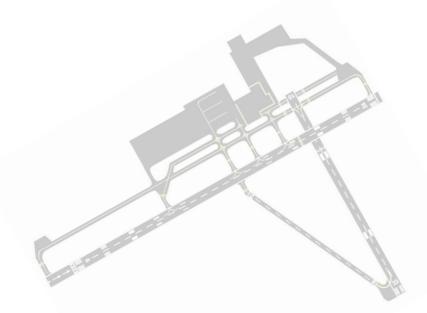
Cheryl Cana Donna





Nantucket MA 02554 00 fax 508.325.5306





## **Aircraft Operations**

14 Airport Road Na phone 508.325.5300

Nantucket MA 02554 00 fax 508.325.5306



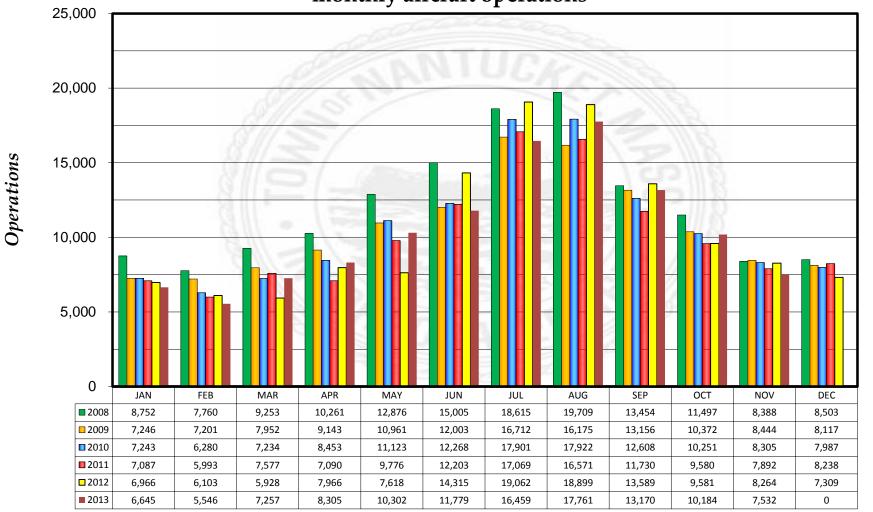
-2012 monthly aircraft operations -

		IT	INERANT	•			LOCAL				INSTRU	MENT		
					TOTAL			TOTAL	TOTAL					TOTAL INSTRUMEN
MONTH	AC	AT	GA	MILITARY I	TINERANT	CIVIL N	MILITARY	LOCAL	OPERATIONS	AC	AT	GA	MILITARY	T
JAN	0	5646	1252	66	6964	2	0	2	6966	0.	641	183	38	862
FEB	0	4968	1116	15	6099	4	0	4	6103	0	692	176	33	901
MAR	0	4573	1251	59	5908	20	0	20	5928	0	1155	268	25	1448
APR	0	6133	1746	27	7906	60	0	60	7966	0	687	247	17	951
MAY	2	5498	1929	25	7452	69	14	83	7618	76	3003	935	30	4044
JUN	143	9820	4140	82	14185	94	36	130	14315	143	3030	1262	33	4468
JUL	182	12413	6370	75	19040	18	4	22	19062	182	3243	1824	24	5274
AUG	190	12315	6249	99	18853	55	0	46	18899	190	4076	2065	43	6374
SEP	93	9388	3917	161	13559	22	8	30	13589	93	2068	979	61	3201
ОСТ	32	7022	2360	128	9542	6	33	39	9581	32	1596	565	54	2247
NOV	0	6382	2104	136	8622	2	0	2	8624	90	957	422	86	1555
DEC	0	5864	1393	50	7307	2	0	2	7309	0	1206	278	24	1508
TOTAL	642	90022	33827	923	125437	354	95	440	125960	806	22354	9204	468	32833

#### -2013monthly aircraft operations -

		IT	INERANT				LOCAL				INSTRUI	MENT		
					TOTAL			TOTAL	TOTAL					TOTAL INSTRUMEN
MONTH	AC	AT	GA	MILITARY 1	TINERANT	CIVIL 1	MILITARY	LOCAL	OPERATIONS	AC	AT	GA	MILITARY	T
JAN	0	5355	1188	96	6639	0	6	C	6645	0.	789	170	51	1010
FEB	0	4419	1038	73	5530	16	0	16	5546	13	579	111	30	733
MAR	9	5604	1565	69	7247	10	0	10	7257	0	603	173	37	813
APR	0	6368	1859	78	8305	0	0	C	8305	0	1198	306	48	1552
MAY	76	7532	2619	75	10302	0	0	C	10302	74	2545	922	44	3585
JUN	150	8226	3290	105	11771	8	0	8	11779	150	3190	1206	47	4593
JUL	199	11154	4980	104	16437	22	0	22	16459	199	5909	2546	39	8693
AUG	201	11707	5790	39	17737	18	6	24	17761	201	4388	2278	20	6887
SEP	115	9099	3809	129	13152	16	2	18	13170	115	2448	1080	48	3691
ОСТ	52	7487	2481	134	10154	30	0	30	10184	49	1494	560	40	2143
NOV	0	5677	1755	68	7500	28	4	32	7532	0	1042	315	37	1394
DEC					Q				0					0
TOTAL	802	82628	30374	970	114774	148	18	160	114940	801	24185	9667	441	35094

- monthly aircraft operations -



■2008 ■2009

■2010 ■2011 □2012 ■2013

14 Airport Road Nantucket MA 02554 phone 508.325.5300 fax 508.325.5306



Operations JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN TOTAL % Change FY 2009 18,615 13,454 11,497 8,388 8,503 7,246 7,201 7,952 9,143 10,961 12,003 134,672 19,709 FY 2010 16712 16,175 13,156 10,372 8,444 8117 7,243 6,280 11,123 12,268 125,577 -6.75% 7,234 8,453 FY 2011 17,901 17,922 12,608 10,251 8,305 7,987 7,087 5,993 7,090 9,776 12,203 124,700 -0.70% 7,577 FY 2012 17,069 16,571 11,730 9,580 7,892 8,238 6,966 6,103 5,928 7,966 7,618 14,315 119,976 -3.79% FY 2013 19,062 13,589 9,581 8,624 7,309 6,645 5,546 8,305 10,302 11,779 126,898 5.77% 18,899 7,257 FY 2014 16,459 10,184 7,532 17,761 13,170

14 Airport Road Nantucket MA 02554 phone 508.325.5300 fax 508.325.5306

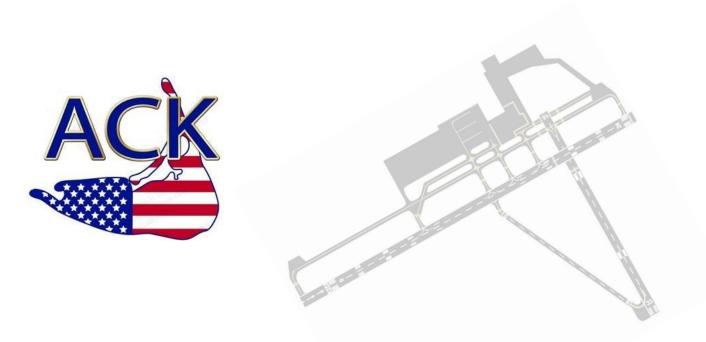
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Monthly FY	Operations November	% Change
FY 2009	8,388	
FY 2010	8,444	0.67%
FY 2011	8,305	-1.65%
FY 2012	7,892	-4.97%
FY 2013	8,624	9.28%
FY 2014	7,532	-12.66%

14 Airport Road Nantucket MA 02554 phone 508.325.5300 fax 508.325.5306



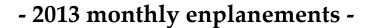
FYTD	Operations Oct-Nov	% Change
FY 2009	19,885	
FY 2010	18,816	-5.38%
FY 2011	18,556	-1.38%
FY 2012	17,472	-5.84%
FY 2013	18,205	4.20%
FY 2014	17,716	-2.69%



## Passenger Enplanements

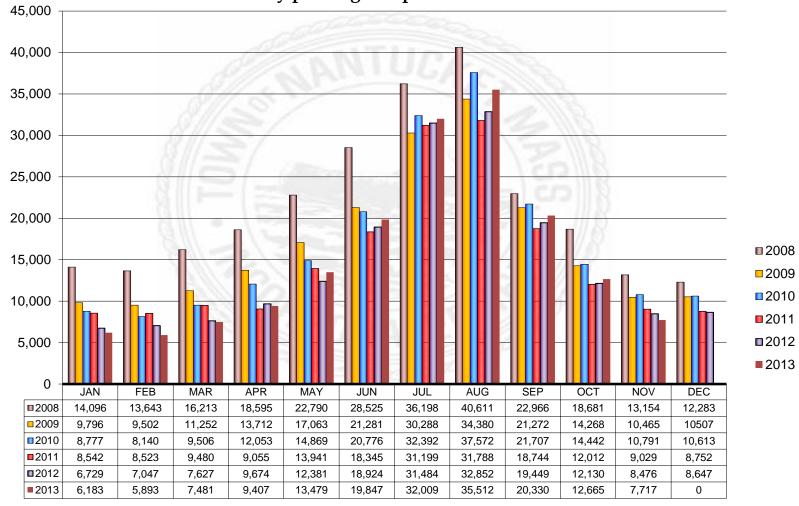
January 10, 2014 7

14 Airport Road Nantucket MA 02554 phone 508.325.5300 fax 508.325.5306



AIRLINE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	TOTAL
Cape Air (KAP)	1112	1106	1307	2019	3470	3929	7158	8526	6411	3739	1685		40,462
Piedmont/United	Closed	Closed	Closed	Closed	Closed	1714	3005	3033	(	Closed	Closed	Closed	7,752
Continental Connection (Comut air)	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	0
Delta Express (Freedom Air)	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	0
Delta Airlines	Closed	Closed	Closed	Closed	Closed	1135	2720	3238	910	Closed	Closed	Closed	8,003
Island Air (ISA)	3359	3249	4176	5038	5677	5480	6277	6558	5727	4932	4140		54,613
JetBlue Airways	Closed	Closed	Closed	Closed	1774	4591	7536	8406	4520	) 1505	Closed	Closed	28,332
Nantucket Air (ACK)	1699	1537	1990	2282	2265	2236	2402	2812	2243	3 2339	1787		23,592
Tradewind Aviation	13	1	8	68	293	311	905	957	326	5 150	105		3,137
USAirways (Air Wisconsin - AWI)	Closed	Closed	Closed	Closed	Closed	451	2006	2228	193	Closed	Closed	Closed	4,878
Monthly Total	6,183	5,893	7,481	9,407	13,479	19,847	32,009	35,758	20,330	12,665	7,717	Q	13.28
% Change Prior Year	(8.11)	(16.38)	(1.91)	(2.76)	8.87	4.88	1.67	8.85	4.53	3 4.41	(8.95)	(100.00)	

- monthly passenger enplanements -



14 Airport Road Nantucket MA 02554 phone 508.325.5300 fax 508.325.5306



#### Enplanement

		S													
		JUL	AUG	SEP	ОСТ	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL	% Change
FY	2009	36,198	40,611	22,966	18,681	13,154	12,283	9,796	9,502	11,252	13,712	17,063	21,281	226,499	
FY	2010	30,288	34,380	21,272	14,268	10,465	10,507	8,777	8,140	9,506	12,053	14,869	20,776	195,301	-13.77%
FY	2011	32,392	37,572	21,707	14,442	10,791	10,613	8,542	8,523	9,480	9,055	13,941	18,345	195,403	0.05%
FY	2012	31,199	31,788	18,744	12,012	9,029	8,752	6,729	7,047	7,627	9,674	12,381	18,924	173,906	-11.00%
FY	2013	31,484	32,852	19,449	12,130	8,476	8,647	6,183	5,893	7,481	9,407	13,479	19,847	175,328	0.82%

14 Airport Road Nantucket MA 02554 phone 508.325.5300 fax 508.325.5306

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Monthly FY	Enplanements November	% Change
FY 2009	13,154	
FY 2010	10,465	-20.44%
FY 2011	10,791	3.12%
FY 2012	9,029	-16.33%
FY 2013	8,476	-6.12%
FY 2014	7,717	-8.95%

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FYTD	Enplanements Oct -Nov	% Change
FY 2009	31,835	
FY 2010	24,733	-22.31%
FY 2011	25,233	2.02%
FY 2012	21,041	-16.61%
FY 2013	20,606	-2.07%
FY 2014	20,382	-1.09%

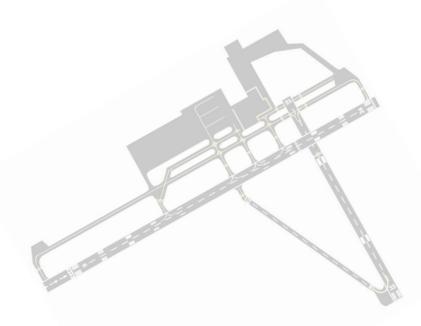
ACK DOS	Nov-12	Nov-14
ACK-BOS  CAPE AIR	1409	1248
JET BLUE	0	0
TOTAL:	1409	1248
ACK-DCA		•
AIR WISCONSIN TOTAL:	0 <b>0</b>	0 <b>0</b>
TOTAL.	U	0
ACK-EWB		
CAPE AIR	192	138
TOTAL:	192	138
ACK-EWR		
CONTINENTAL	0	0
TOTAL:	0	0
ACK-HYA	_	_
CAPE AIR	5	3
ISLAND AIR NANTUCKET AIR	4387 2085	4140 1787
TOTAL:	6477	5930
ACK-HPN		
CAPE AIR	17	6
TOTAL:	17	6
ACK-JFK		
DELTA	0	0
JET BLUE	0	0
TOTAL:	0	0
ACK LCA		
ACK-LGA DELTA	0	0
TOTAL:	0	0
ACK-MVY		
CAPE AIR	293	290
TOTAL:	293	290
ACK-PVD		
CAPE AIR	0	0
TOTAL:	0	0
COMPINED TOTAL	0.200	7.642
COMBINED TOTAL:	8,388	7,612





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Freight

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AIRLINE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Cape Air (KAP)	72,581	56,309	61,581	68,765	69,878	92,961	78,027	90,506	74,068	68,380	53,827		786,883
Island Air (ISA)	47,084	37,951	53,076	62,334	96,930	107,996	127,426	139,568	75,994	61,509	61,691		871,559
Wiggins-FedEx	17,720	20,649	25,489	37,112	51,972	77,857	96,022	77,641	42,818	35,557	29,999		512,836
Wiggins-UPS	2,633	6,167	1,645	1,427	7,795	5,722	6,170	3,355	4,535	4,562	4,616		48,627
Monthly Total	140,018	121,076	141,791	169,638	226,575	284,536	307,645	311,070	197,415	170,008	150,133		2,219,905
% Change Prior Year	9.94	3.23	0.90	6.03	10.02	(4.25)	(7.72)	(10.48)	(9.94)	(1.92)	(10.74)		

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